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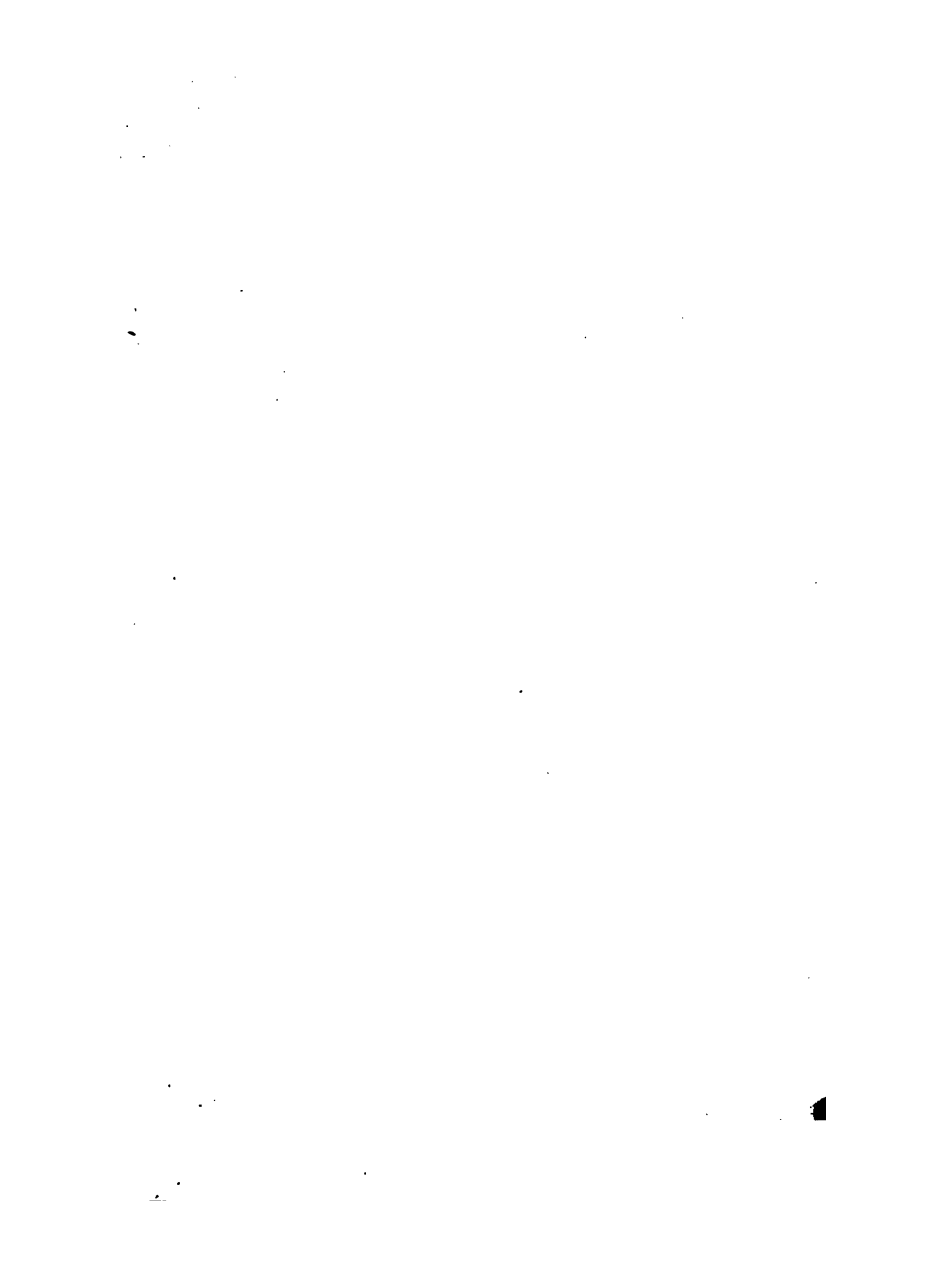
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A HAND-BOOK  
OF  
SCHOOL MANAGEMENT  
AND  
METHODS OF TEACHING.

BY  
P. W. JOYCE, A.B., M.R.I.A.,  
HEAD MASTER, CENTRAL MODEL SCHOOLS, DUBLIN.

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## PREFACE.

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IN the year 1856, the Commissioners of National Education in Ireland appointed fifteen organizing teachers, for the purpose of introducing among the national schools an improved and uniform organization, and of diffusing among the national teachers a more extensive practical knowledge of school keeping. To fit them more perfectly for their duties, the organizers underwent a preparatory course of instruction and practical training, under P. J. Keenan, Esq., then head inspector of national schools. Mr. Keenan delivered to them a series of lectures on the science and practice of school management, including, among a variety of subjects, a detailed description of the systems of organization best suited to the national schools of Ireland. This Hand-book may be said to have originated in those lectures. I have incorporated the most important of them, and they form a very considerable portion of the book. On my own part, I have given the principal results of my experience, both as a teacher, and as an organizer.

This book has been written with special reference to the wants of Irish national schools. While carefully avoiding all mere theory, I have endeavoured to render the instruction contained in it, plain, useful, and practical; there is not, I believe, a plan, opinion, or suggestion in the whole book, that has not been carried out successfully, either

by myself, or by others under my immediate direction. The systems of organization originated in this country in 1856, are here very fully described; it is the duty of every national teacher to make himself thoroughly and practically acquainted with them in all their various details, for they are fast becoming part and parcel of our national system.

I was myself one of the organizers, and I look back with pleasure to a course of lectures that first seriously turned my attention on the science of school management, and to my intercourse with inspectors, managers, and teachers, during the four years that I assisted in carrying out the organization.

To the reports of the head inspectors, and of some of the district inspectors, I have to acknowledge myself indebted for some useful practical hints.

—I have not entered on the question of moral and religious training; for many reasons I have thought it wiser to leave this important part of the subject to others better able to deal with it.

I cannot expect that everyone will agree with all that is put forward in this Hand-book; but I do hope that every national teacher who reads it carefully, will find in it a good deal that will be practically useful to him in the working of his school.

CENTRAL MODEL SCHOOLS, DUBLIN,  
*February, 1863.*

A

# HAND-BOOK OF SCHOOL MANAGEMENT.

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## PART I. MECHANICAL ARRANGEMENTS.

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### CHAPTER I. HOUSE. FURNITURE. APPARATUS.

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#### HOUSE.

##### 1. SITE; SIZE; SHAPE; FIRE-PLACE.

THE site of a school should be dry and cheerful, and easily accessible to the great bulk of the population. No trees should be allowed to grow very close to the house either in front or rear. Trees too near a building generally render the walls damp; they are, besides, gloomy, as they more or less exclude the light and obstruct the view. These are matters of importance in an ordinary dwelling-house—much more so in a school-house.

A school should be large enough “to accommodate conveniently the largest daily attendance which the locality is likely to furnish.” In estimating the proper size of a school, eight square feet at least should be allowed for each child in average attendance. By the adoption of a proper organization and furniture arrange-

ment, the school business can be carried on with small inconvenience, and with sufficient freedom of movement, even if the room be so crowded on any particular day, or succession of days, as to allow only six square feet for each child *actually present*. Allowing eight, therefore, provides for a fluctuation of about a third over the average. Thus a room  $30 \times 16$  feet will accommodate an average of 60, and is sufficiently large for an occasional attendance of 80. With this number, however, the room would be much crowded, and would require the most careful and thorough ventilation.

The walls of a school should never be less than twelve feet high, and in all large schools they require to be still higher. Anything lower than this will scarcely allow sufficient head-room for ventilation, or wall space for maps.

The best general shape for a school-room is that of a plain rectangle, having the length twice the width. If an attendance sufficiently large be expected, to warrant the appointment of an assistant, a class-room, *immediately off the principal room*, will be found a most useful appendage. If the principal room be very large, it will be better to have two moderately-sized class-rooms, than one very large one. Observe, however, that a detached class-room is of scarcely any use, unless there is a second responsible teacher in the school.

If the room be small, the fireplace may be in one end; if large, either it should be in the middle of one side, or there should be two—one at each end. The fuel, whether turf or coals, should never be exposed to view: if, for want of a cell or store, it must be kept in the school-room, there should be a box or cover of some kind to hide it, as well as to preserve cleanliness.

## 2. FLOOR.

Flags, bricks, tiles, and clay, are all bad materials for the floor of a room. As there are still, however, vast numbers of our national schools which have clay floors,

and as many years will no doubt elapse before the evil is completely remedied, we think it better not to ignore their existence. A few practical suggestions shall be given in relation to them, whenever necessary. If a school must have a clay floor, let it be properly made, by placing a layer of stones at bottom, and mixing some slaked lime with the surface. The ground outside, should be somewhat lower than the floor; if it be higher, it is sure to produce damp. The teacher should also take care, that no rubbish be allowed to accumulate against any part of the walls outside, as it will be invariably attended with the same result. If these precautions be adopted, there will be a hard, dry, and comparatively comfortable floor. The best clay floor is bad enough; but when it is damp, it is cold, disagreeable, and unhealthy. To render such a floor dry requires no great trouble, and very little expense, and the labour and cost will be well repaid, by the increased comfort and healthfulness of the school-room. The proper remedy is to dig up the surface, and after thoroughly pulverizing it, and mixing a little lime, to trample it down again. At the same time, the ground outside, near the foundation should be cleared; *and if it be not lower than the floor, a drain should be made all round.*

A boarded floor is the best of all; no other can compare with it for comfort, warmth, and healthfulness. Boards, one inch thick, can be laid on a floor at a cost of from  $3\frac{1}{2}d.$  to  $6d.$  per square foot, including joisting, the removal of the floor, and any masonry that may be necessary under the ends of the joists. If the floor be perfectly dry—of that hard, powdery kind, that never shows the least appearance of damp—it can be boarded in the following manner for considerably less than the above. The floor need not be dug up at all, but small joists (two inches thick by three deep) are to be sunk into it, by cutting little channels for them; they may be placed eighteen or twenty inches apart, resting on the floor, and should be sunk so deep, that the boards



when on them, will be very nearly, but not altogether in contact with the floor—say one inch above it. This plan saves the cost of removing the floor, as well as that of the masonry usually placed under the joists, and not more than half the quantity of joisting will be required. It applies, however, only when the floor is quite dry, both in winter and summer: if ever there is the slightest damp, the timber will rot.

### 3. CEILING; WINDOWS; OFFICES.

If the house be of only one story, comfort and health both require that the room be ceiled. If the roof be slated or tiled, it is subject to all vicissitudes of temperature in the absence of ceiling; it is miserably cold in winter, and intolerably hot under the sun of summer.

A thatched roof overhead presents a very unsightly appearance indeed, and renders the preservation of cleanliness a difficult task; it is just as easy to ceil a roof of this kind as one that is slated. If the ordinary plaster ceiling be thought either too heavy or too expensive, the room may be covered over very neatly, and without much cost, with a sheeting of thin boards. Any common carpenter can do this. Suppose a small room,  $24 \times 16$  feet, and that the boards are laid longitudinally, and nailed to the rafters and collar-braces; about fifty-four twelve-foot leaves, nine inches broad, will cover the whole roof; and if they be  $\frac{3}{8}$ -inch thick, they can be all cut from seven three-inch planks, twelve feet long. The boards should be always painted either white or some very light colour.

It must be borne in mind, though it is frequently forgotten in practice, that a house is furnished with windows for *two* purposes—to give light, and to afford ventilation. For the latter, it is quite necessary to have them in at least two opposite sides of the room. They should be raised at least five feet from the floor, so that they may be beyond the reach of idle children

to gaze through or break them, that sufficient wall space for black boards, tablets, and maps, may be secured, and that the currents of air may pass over the heads of those who are in the room. If the windows be less than five feet high, the lower panes should be muffed or screened. Both the upper and lower sashes should be made to open for purposes of ventilation; the simplest and cheapest contrivance for opening and closing being the common side pulleys.

No school should be without suitable out-offices; they should be neither in immediate proximity with the school, nor yet so far removed as to render frequent supervision inconvenient. In mixed schools, i. e. those attended by children of both sexes, there should be separate out-offices, either at opposite sides of the school, or with opposite approaches, and in this latter case they should be completely separated by a high wall.

## FURNITURE.

### 4. CONSTRUCTION OF DESKS.

The desks are the most important part of the school furniture, for on their construction depends, in a great measure, the children's progress in writing, as well as to some extent their comfort and health. Yet it is comparatively rare to find a well-shaped desk in our ordinary national schools. The reason is plain; they are commonly intrusted to persons who know nothing about their construction. No one can make a desk who is not acquainted with the proper proportions of the different parts; this knowledge every teacher should possess, and in this, as well as in the management of furniture generally, he should be engineer—should be able to give without hesitation, all necessary directions to the workmen.

Desks are commonly made too high and too much slanted; on a desk made in this way, a child cannot sit comfortably or write well. A good standard height is

28 inches. The slant part should be very nearly level; the whole amount of the inclination should be not more than an inch and a quarter, leaving for the height of the part next the children's breasts,  $26\frac{3}{4}$  inches. This part should be not more than 11 inches perpendicularly over the form, which allows for the height of the latter,  $15\frac{3}{4}$  inches. Breadth of the horizontal part at top, 3 inches; breadth of oblique part, 12 inches; horizontal distance between the desk and its own form, 3 inches; width of form from 7 to 9 inches. The whole breadth of the desk, therefore, supposing the form to be 8 inches, is  $3 + 12 + 3 + 8 = 2$  ft. 2 in. In a female or mixed school, the distance between the desk and its form should be not less than 5 inches.

The beading usually placed on desks to prevent slates, &c., from falling off, is generally made too high. In such desks as have been described, it should be very low, not more than the eighth of an inch.

There should be apertures for the slates so made, that the latter will rest perpendicularly when in their places; they should not hang by strings from buttons or nails, but should rest on a solid support, set firmly at bottom. About 2 inches of the slate should project from the top, and there should be a slate aperture for every 15 or 18 inches in length. The front board which confines the slates, should be slightly inclined from the perpendicular, as this gives the desk a more graceful appearance, and it should project about three-fourths of an inch over the top. The best supports are iron standards, which can be procured at any iron-founder's; when ordering them, take care to state the proper height and slant. If these cannot be had, or if thought too expensive, timber feet will answer very well.

An old desk can easily be furnished with slate apertures. A half inch board, 9 inches broad, laid along the front of the desk, will be a sufficient guard for the slates. The mode of making the apertures needs no description, as it is very simple; a stout narrow ledge, for *the slates to rest on*, should be firmly fastened under-

neath. The aperture should be so guarded that the slate cannot possibly fall through, even though a person should try to force it down.

On the horizontal part, parallel with, and about an inch from each aperture, a groove, rounded at bottom, should be sunk to hold pencils, pens, &c.; it should extend the length of the slate aperture, and should be about five-eighths of an inch broad and one-fourth of an inch deep.

There should be an ink-bottle for every two pupils, or, if thought necessary, one for each. They should be kept corked or covered in some way, otherwise the ink will be spoiled with dust, and wasted by evaporation. If the Board's leaden bottles be used, the best plan is to sink them deeply into the desks, and cover them with a narrow hinged ledge, which should also be sunk in the horizontal part, so that when it is shut down, the surface will be level. There may be a lid for each bottle, or one for every two or three.

The best ink-covers are those lately introduced into the Central Model School; they are made of cast-iron, with a sliding cover, and an aperture at bottom to receive the leaden ink-bottles.

Should it be thought desirable to furnish old desks with bottles, without incurring any expense, the common earthen penny bottles, which can be at all times procured, will answer very well. A circular cavity might be sunk for each in the desk, about half an inch deep; the bottles rest in these tightly enough to be steady, but so that they can be readily taken up whenever they want cleaning. Each should have a cork tied to the neck with a little string, and they should always be corked when not in use. This is not a very ornamental plan, but there are many rural schools where it will answer quite well; it is inexpensive, and is just as useful as any other plan whatever.

It will be found extremely useful, and not at all expensive, to have a little box in one end of each desk, with a shut opening vertically downwards. This will

hold copy-books, pens, pieces, &c., or the slates used by the children in the drafts.

In calculating the number of pupils a desk will accommodate, a space of 18 inches is commonly allowed for each; thus a desk  $10\frac{1}{2}$  feet long will accommodate seven pupils. This gives room enough for the advanced pupils to write, and is more than sufficient for the smaller children; the same desk will be long enough for eight of those in the first or second class.

### 5. FASTENING OF DESKS.

Desks should be always fixed down to the floor. When they are large and heavy, indeed, and when desk and form are joined together as one block, they are pretty steady, even without being nailed down, but still they are constantly shifting their position. Besides, heavy furniture of any kind that is unfixed and constantly moved about, becomes disjointed and rickety in a very short time; if it be fixed, it will last more than twice as long. When the desk and form are separate, which is the case in great numbers of our rural schools, nothing can exceed the annoyance caused by their shifting, shaking, and falling.

If the floor be boarded, it is easy enough to fasten desks; any teacher able to use a hammer or a turn-screw can do it for himself. If they are furnished with *soles*, or horizontal pieces at bottom on which they rest, nothing is required but the driving of a few long nails or screws. But if there be no soles, that is, when the desk stands simply on four or six legs like a chair, let a sole be nailed on each pair of legs, up against the bottom, and not against their sides. This sole is to be a little piece of board, 4 inches broad, an inch thick, and so long that it will extend an inch or so beyond the legs. The desks are then to be placed in the proper position, and the soles nailed down to the boards. The forms, if separate from the desks, can be fastened in the same manner.

To fix desks on a clay floor is also a matter of little difficulty. Let them first be laid accurately in the position they are intended to occupy, and let two chalk lines be drawn along the floor, passing through all the end legs. The desks are then removed, and two little channels, about 8 inches broad by 6 deep, sunk in the floor along the chalk lines. A piece of timber is laid in each channel, long enough to catch all the legs. These sleepers may be made of any kind of rough timber; each might, if necessary, consist of several pieces, only taking care that the upper surface be moderately level; the soles of the desks are to be nailed down to the sleepers. The floor is then to be filled up with mortar round the legs, and the desks will be not only perfectly firm, but very neat looking.

#### 6. ROSTRUM; TABLET-RAILS; CAP-RACK.

An elevated rostrum is a very unnecessary piece of furniture; it is rather an encumbrance than a convenience. The best substitute is simply a small table, 3 feet by 2, with a drawer to hold the account-books, and for seat, either a stool or a common chair. The greater number of rostrums in common use, serve also as school-presses; so far they are useful, but if there be otherwise sufficient press-room, there ought to be no rostrum.

The whole of the available wall space should be furnished with tablet-rails, separated by intervals of 18 inches or 2 feet, the lowest about  $4\frac{1}{2}$  feet from the floor; there might be two, three, or more rails, according to the height of the walls. They will be very useful for hanging maps, tablets, pictures, &c., which, without them, are too often seen hanging in all possible directions, without the least attempt at arrangement, while the walls become wrecked with nails. They are not expensive, and may be made by any carpenter in the following manner. A five-eighth or half-inch board, nine inches broad, is to be cut longitudinally into either

three or four slips; each of these, when planed, will be from 2 to 3 inches wide. The edges intended to be turned outwards, should be either bevelled or moulded. The rails should be fastened up so as not to wreck the walls; this can be done either by plugging the walls, or by small holdfasts or wall-hooks, assisted by eight-penny nails. They should be painted some dark colour; oak or dark brown will answer very well. Once a school is furnished with rails, a nail should never be seen in the wall; the tablets and pictures should be hung only from them, and should of course be dispersed along the walls, according to some definite arrangement. A room 35 × 16 feet should be furnished with three rows of rails all round, plainly made, firmly nailed up, and neatly painted, at a cost of from ten to fifteen shillings.

If there be a cap-room, this of course is the place for the cap-rack; but if not, it should be placed in some part of the school-room not much exposed to view, as caps are anything but ornamental in a neat room. It should, if possible, be fixed in such a position, that the children can march past it in single file, either to hang on or take off their caps. The highest rail should be always within reach of the pupils of the highest class, that is, not more than 5 or  $5\frac{1}{2}$  feet from the floor; the lowest may be placed at the height of 18 inches, and between these two there may be four others—six in all, at a distance of about 10 inches one from another. The hooks, which may be either of hard wood or of cast-iron, as sold in the shops, can be placed six or seven inches asunder. A rack, consisting of six rails, each five feet long, will admit of about sixty hooks, and can be put up at a very trifling expense. A rack for a girls' school should be somewhat differently constructed; the hooks should be about nine inches asunder, and the lowest rail not less than 30 inches from the floor.

## 7. GALLERIES; PRESSES.

A gallery consists of several seats, ranged parallel one behind another, and each one rising higher than the one in front. It is a most convenient place for simultaneous teaching, the teacher standing in front, and the pupils sitting in a solid square before him. As a general rule, not more than from 25 to 40 children should be taught together in one gallery; it will be unnecessary therefore, to make it larger than will be sufficient to accommodate this number. A small gallery of five seats, each eight feet long, will give ample accommodation to 35; four seats of 7 feet long will hold 24. Each seat may rise from 6 to 9 inches higher than the next in front; each should be separated from the seat next behind it, by a walking space of at least 15 inches; that is, allowing for the seat 9 inches, seat and walking space will occupy a horizontal width of at least 24 inches. The last seat, which is usually against the wall, should be 12 inches wide. A gallery of five seats will therefore, extend at least 9 feet from the wall. If the sides of the gallery do not rest against walls, they should be guarded by railings to keep the children from falling. At each side there should be left a little gangway for the children to pass, which, if space be an object, may be provided with hinged seats.

A gallery is usually constructed in a separate class-room, and this is far the best place, if such a class-room be suited to the circumstances of the school. If there be no class-room, a small gallery may be placed in the school-room, provided of course there be sufficient space. It should be as far from the draft circles as the school-room will permit; and if possible it should be so placed, that the children when sitting on it, shall not have their faces turned towards the general school. For example, if the school-room be long and narrow, the gallery might be placed at one end, against one side wall, the children being turned towards the other side wall.



This arrangement, though not absolutely essential, tends very much to lessen noise.

We have heretofore been speaking of *raised* galleries, that is, having seats rising one over another. They are always more or less costly, and are therefore not within reach of the poorer class of schools. A very simple, and at the same time a very useful gallery, may be made merely of common forms. This scarcely entails any expense, and may therefore be procured by every teacher, as there is generally a sufficient supply of forms in schools. Let four of these be got, each seven or eight feet long, and of the respective heights of  $12\frac{1}{2}$ , 14,  $15\frac{1}{2}$ , and 17 inches. Let the lowest one be fastened down to the floor parallel to the wall, and 3 or  $3\frac{1}{2}$  feet from it; the next in height is fastened down behind this, leaving between it and the other, a sitting and walking space of 14 or 15 inches. Let all be placed in this manner, each rising  $1\frac{1}{2}$  inch over the next in front, and they will form a gallery which, if not very ornamental, is just as useful as if it were raised. The children, when sitting on it, look towards the wall, which arrangement has the advantage of lessening the noise. The space in front, between the lowest form and the wall, should be not less than 3 feet, and not more than  $3\frac{1}{2}$ , as this will just allow a map or a black board to hang on the wall, without the intervention of an easel.

There should be convenient press accommodation for the books and requisites, as also for the charts, globes, apparatus, &c. The presses in schools are usually unnecessarily deep, and are not furnished with a sufficient number of shelves; thus they afford only very poor accommodation in proportion to their bulk, and to the school space they occupy.

#### APPARATUS.

##### 8. LIST.

“No school can be regarded as in a fit working condition in which there is not a black board for every draft

under tuition, and a large one for the use of the division in the desks. For instance, if a school consists of two divisions, and each division of four drafts, there will then be required four small black boards for the drafts, and one large one for the division in the desks. It is unnecessary to refer to the importance of the black board, it being now admittedly to the schoolmaster what the compass is to the mariner; without it he wanders from the track he should follow, strays about in confusion, and is lost in bewilderment.”\* In our apparatus list there are black boards of various sizes and constructions, out of which the teacher will be able to select what best answers his own school. The most generally suitable for draft teaching, however, are those of 30 x 24 inches, not framed, price 1s. 9d. each. The teacher should furnish these with rings or cords for suspension, and they should be permanently hung up before the draft circles. To each black board there should be attached a wiper of some sort, such as a bundle of quills, a goose wing, a piece of cloth or sponge, &c.

There should be a short pointer, hanging by a looped piece of cord, at the centre of every circle, for various teaching purposes, such as the tablet lessons of the first class; and for map teaching, &c., there should be a few long pointers, which might be kept in the press when not in use.

An easel is a most useful article; every teacher should endeavour to have one at least. The best on the list, as well as the best value, though the most expensive, is the “Framed easel, six feet (long), double leg,” price 4s. 8d.

For the purpose of teaching the very young children elementary computation, the school should have at least one arithmeticon. Any of those mentioned (under the name of “Arithmetic frames”) in the Catalogue will answer very well.

There ought to be in every school, even the smallest,

\* Report of P. J. Keenan, Esq., for 1856.

one large map of the world, one of Europe, and one either of Ireland or the British Islands. Beyond these, the more large maps the school can afford, the better. Johnston's School Maps ( $27 \times 23$  inches) are extremely well suited for small schools; they are very distinct, and contain almost as much as the large maps; price in our apparatus list, 2s. 3d. each. Betts's outline maps are most useful; there are altogether seven of them, price 1s. 3d. each; and every teacher who wishes to give his pupils a sound knowledge of map geography, should have them in his school.

The Board's Catalogue of School Apparatus contains a copious list of almost everything necessary or useful in a school. For the teachers or managers of the humbler classes of schools, who are at the same time anxious for improvement, and desirous of avoiding heavy expense, the following selection, in addition to the articles already named, may be found convenient, containing some of the cheapest and most useful diagrams.

	s.	d.
3-inch Semiglobe, hinged, price, . . . . . each,	1	11
Atlas (Physical, &c.) of the British Empire, ,,	4	2
(An excellent study atlas for teachers.)		
View of Nature in all Climates, . . . mounted, ,,	3	2
View of Nature in Ascending Regions, ,,	2	6
The Human Species, . . . . . ,,	5	8
Natural History Prints, . . . . . ,,	0	4
Natural Phenomena do. . . . . ,,	0	4
Animals, their Comparative Sizes, . . . ,,	3	0
Johnston's Diagrams, illustrative of Natural Philosophy, . . . . . ,,	3	9
Lardner's do. . . . . do. ,,	0	10
Reynolds' Astronomy, six sheets, ,, per set,	7	6
Darton's do. . . . . ,,	4	3
Thermometer, . . . . .	0	8

(For manner of hanging Maps, &c., see Part I., Chap. V.)

## CHAPTER II.

### SYSTEMS OF ORGANIZATION.

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#### 1. PERPETUAL EMPLOYMENT.

VISIT any national school, the teacher of which has not adopted a proper system of organization, and with great probability, you will observe the business carried on in something like the following manner. One or two classes are standing up, receiving instruction from the master and a monitor; all the rest of the pupils are sitting, some few of the more advanced, writing or working from their arithmetics, a few others preparing lessons with apparent attention, but the great majority, especially of the young children, openly idle. You will find that this is the manner of transacting business during the entire day; that not more than two or three classes are actively and profitably engaged together at any one time; and that, consequently, although the teacher may be uninterruptedly employed teaching class after class, a large proportion of the school day is absolutely lost to the majority of the pupils.

Is it necessary that these children sit so long idle? Could we not contrive some plan by which all might be profitably employed the whole day, with only half an hour's intermission for play? This has been accomplished, and is perfectly possible in every school. Let us then begin by laying down this important maxim, which may be called "The principle of perpetual employment:"—"Every child in the school should be engaged at some useful employment, at every moment during the entire day." From this is to be excluded "preparing lessons;" in the first place, all lessons should be prepared at home, and, in the second place, every practical teacher knows that preparing lessons in school, is generally only another name for idleness.

To solve the problem of perpetual employment is one of the objects of every system of organization; we shall proceed at once to describe the systems that are most generally useful, and best adapted to the circumstances of our national schools. The arrangement of furniture in a room depends on the manner in which the school is to be organized; we shall therefore, in connexion with each system, describe the particular arrangements suited to it.

### BIPARTITE OR TWO-PART SYSTEM.

#### 2. DESCRIPTION; DIVISION OF PUPILS.

When the whole of the pupils are divided into two parts, one division being engaged at some desk lesson (as writing, &c.), while the pupils of the other division stand round the room in drafts at an oral lesson (such as arithmetic, reading, &c.), and when the two divisions change places and subjects at the end of each lesson during the entire day; this is what is called the bipartite or two-part system of organization. This system is very suitable for the generality of national schools, and it will be necessary therefore to enter somewhat into detail regarding the manner of carrying it out.

By the word "class," is meant here all the children who read the same class-book; all those, for instance, who read out of third book, form the third class. By "draft," is meant all the pupils who stand together at the same circle to read the same lesson; there may be several drafts in the same class. Ten or twelve pupils will be quite a sufficient number for each draft (taking the word in the sense now explained), and some drafts might be even smaller, especially among the junior children, and in small schools, where it is often difficult to find even a dozen children so nearly equal in proficiency, as to be fit to read the same lesson and work the same arithmetic. The chief reason for limiting the drafts to this number is, that each individual pupil may

have sufficient time for reading; if the draft be very large, it will be impossible to accomplish this, and at the same time to explain and examine on the subject matter, within the time usually allowed for a reading lesson. By limiting the number to ten or twelve, however, it is not meant that the drafts are to be always kept apart. It is generally necessary to separate them at reading, and at some other lessons of a like nature, but there are certain subjects, such as geography, grammar, &c., in which two or more drafts might be joined. Directions will be given in the proper place when to keep the drafts apart, and when to combine them into larger sections.

The two great divisions of the pupils must be nearly equal in numbers. No fixed rule can be laid down as to the particular drafts that compose each, as this depends entirely on the school. In some schools the children of the first and second classes are equal in number to those of sequel, third, and fourth; in others, again, those of the first class alone are as numerous as all the rest of the pupils taken together. It more commonly happens, however, that the first and second classes constitute more, and the first alone less, than half the entire school. In this case the second class must be divided, part going to the senior and the remainder to the junior division. We shall suppose a case: let there be 69 pupils in daily attendance, who are partitioned in the following way; fourth class, 6; third, 9; sequel, 11; second, 18, in two drafts, and first 25, in three drafts. In this school the following would be the proper division:—

JUN. DIV.	3rd drft. of 1st.	2nd of 1st.	1st of 1st.	2nd of 2nd.	Total.
	8	8	9	10	35
SEN. DIV.	1st drft. of 2nd.	Sequel.	Third.	Fourth.	Total.
	8	11	9	6	34

There are many schools, especially in rural localities, in which the relative numbers in the different classes are subject to much variation according to the season. In the winter months the grown-up pupils attend, while the young children are kept at home by the severity of the weather; in summer it is the reverse, the little ones attend, and the elder pupils are generally employed at home. The partition made in summer, therefore, may not answer in winter, and the teacher will be careful to restore the equality of the two divisions, by transferring, at the proper time, a draft from one to the other. Such a change as this should not be frequently made—if possible not oftener than twice a year—as it always acts more or less injuriously on the discipline of the school.

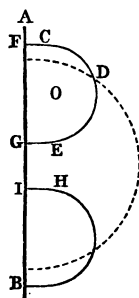
### 3. DRAFT SPACE AND CIRCLES.

The space for draft teaching should be along one or more of the walls; this is far the most convenient place, for on the walls can be suspended the chief teaching appliances, such as maps, tablets, black boards, &c. Besides, a class standing next a wall is to some extent isolated from the rest of the school. Any considerable space in the middle of the floor, with desks or other furniture placed between it and the walls on each side, may be regarded as of comparatively little value for teaching purposes. If there be question of choice between the two side walls, that one should be chosen for draft space which is best illuminated, and least interrupted by windows, doors, and fire-places. This space should be so broad, that when the pupils are standing at the circles, there will be room for a person to pass freely between their backs and the desks without touching either. If the ends of the desks be seven feet from the wall, it will be amply sufficient to allow this. In most small schools, 6 or  $6\frac{1}{2}$  feet will be quite enough; and if economy of space be a special object, it may be reduced to five, but this will not allow a person to pass

behind the children. In very large schools it might be left much broader; in the principal Central Model School there is a space of 11 feet along each side wall.

There must be as many draft circles as will accommodate one division, that is, half the pupils at once. The number, therefore, will vary with the attendance; but to provide for contingencies, there should be, if possible, one more than the number absolutely necessary. While, on the one hand, there must be a sufficiency of desks, on the other hand, as much as possible of the walls should be left free for draft teaching. In small schools it is usually sufficient to leave a space along one side wall and at one end. In a large room three walls may be necessary; and if the room and the attendance be both very large, there may be circles all round, the desks being placed in the middle.

The following diagram will show how circles are to be made. Suppose AB to be a portion of the school



wall. Take a point O for the centre, about 15 or 18 inches from the wall, and with a radius of three feet, describe the semicircle CDE, and continue the ends to the wall by the perpendiculars CF and EG. The circle so marked, which may be regarded as of moderate size, will hold twelve pupils. In a small school, where space must be economized, the circles may have a diameter of five feet, and if necessary the centre may be taken nearer to the wall. The farther apart circles are

made from each other the better, but the distance between two adjacent circles (that is, GI) should never be less than two feet. To determine the best places for them is often a matter requiring some thought. In case of doubt or difficulty, it will be better to mark them with chalk for a few days, when they can be altered if necessary; when the best positions have been found, they can be marked permanently. For the purpose of teaching large classes together, there ought



to be two or more large circles pitched among the smaller ones. Each of these should have a radius of five or six feet, and may be placed as in the diagram, or in any other position that may be found convenient.

The best kind of compass for describing the circles is a piece of cord; let one end be fastened by a nail in the centre, and the other formed into a loop; the circle can then be marked with an awl or a long nail. Various materials are employed for marking them permanently. Some use strips of brass; others, brass nails with flat heads, driven closely all round, the heads being sunk into the boards. This plan appears on the whole to answer better than any other. If brass nails or strips be thought too expensive, common black paint will answer very well; painted circles are quite clearly defined, last for a long time, and are very easily renewed. Any teacher or monitor can make such circles as these without difficulty; the whole may be done in a couple of hours, and the cost will not exceed a few pence. On a clay floor, if it be moderately firm and smooth, circles may be rendered permanent by simply sinking the nail mark to a depth of a quarter of an inch; these marks will retain their distinctness for many months.

#### 4. LOCATION OF DESKS.

A notion very generally prevails among those who have no technical knowledge of school management, that in furnishing a school it is necessary to provide a seat for every child in actual attendance. It often happens, therefore, that school-rooms are overcrowded with desks and forms, only a narrow passage being left all round, and a small space near the rostrum for class teaching. Where the bipartite system is adopted, as there is never more than a division sitting at any one time, the number of desks may be limited if necessary to as many as will accommodate a little more than half the greatest attendance expected. Suppose, for example, a school in which there is a maximum attendance of 75

during some particular month, but whose average for the year is only 50; here there should be desk accommodation for 38 or 40. Any one of the four following sets of desks will answer, the particular set to be chosen, being determined chiefly by the shape of the room:—

5 desks of 12 feet long = accommodation for <i>at least</i> 40 pupils.							
6	"	9	"	=	"	"	36 "
8	"	7½	"	=	"	"	40 "
10	"	6	"	=	"	"	40 "

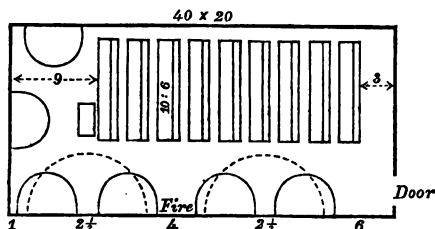
In Holland and Prussia, and other Continental countries, the pupils are taught all their lessons sitting; they sit, in fact, as a general rule, the whole day. For this purpose the desks are often placed in groups, those pupils that sit on one group forming a class to be taught by one teacher. There are many modifications of this system, both as regards the individual shape of the groups, and the mode of distributing them through the room; but the intention is the same in all, to enable the teacher or pupil teacher to teach the children while sitting in a class immediately before him. Though the grouping system is still upheld by some educationists, it appears to be falling into disrepute among those who have the best means of judging of its merits, that is, among the most intelligent teachers. In Ireland it has been tried in some of our model schools, and it has been disapproved of both by teachers and inspectors. We find by experience that, in the schools of our own country at least, it is not a good plan to keep the pupils constantly sitting; that a regularly recurring alternation of position from sitting to standing, and *vice versa*, at short intervals during the day, with corresponding changes of subjects, while increasing the healthfulness of school employment, imparts an agreeable variety to the daily routine, and infuses a spirit of activity, life, and cheerfulness into the working of the school. Keeping out of sight for the present the consideration of galleries, we find too that instruction in those subjects requiring direct oral teaching, is given with most life

and effect when the pupils are standing in a circle round the teacher. We shall therefore once for all dismiss the grouping system, and lay it down as a general rule, that the best way to arrange desks is the old Lancasterian plan of placing them in the form of a rectangle on the floor; always remembering that there must be sufficient space left along one or more of the walls for draft teaching.

#### 5. PLANS TO SUIT THE BIPARTITE SYSTEM.

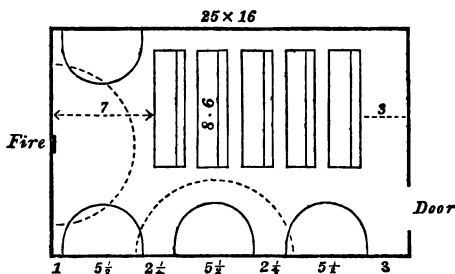
Let it be required to furnish a room 40 feet long by 20 in width. Allowing 8 square feet for each child, this room will give accommodation to 100 average attendance, but to provide for fluctuation, we shall calculate on an attendance of 130. Here the best way to arrange the desks is to place them across, so near one side wall as to leave a walking space 18 inches wide, and leaving draft space along the opposite wall and at one end. Suppose the draft space to be 8 feet broad; this will allow the desks to be  $10\frac{1}{2}$  feet long, and each will hold, therefore, seven or eight pupils. Nine of these desks will be sufficient, on which from 63 to 70 pupils can sit, and which, allowing walking space of a foot between each two, will occupy about 28 feet of the length of the room. If the last desk be placed with its seat 3 feet from the end wall, a clear space of 9 feet will be left at the other end. There ought to be six circles, as each division, when the attendance is at its maximum, may contain six drafts; for these the present space will be amply sufficient. The following is the plan of the room according to these directions; observe the manner in which the large circles are placed among the others:—

Fig. 1

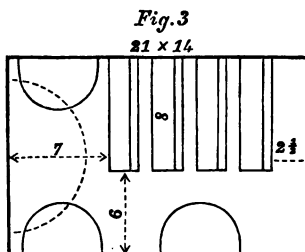


As a second example, let the dimensions of a room be  $25 \times 16$  feet; this will accommodate an average attendance of 50, but provision shall be made for 60. The draft space in this small school need not be more than 6 feet wide, which (leaving a passage of 18 inches by the other wall) allows the desks to be  $8\frac{1}{2}$  feet long. Each will accommodate on the average six pupils, and five of them will be sufficient. There may be four circles, and by making them  $5\frac{1}{2}$  feet in diameter, they can without difficulty be placed as in the diagram; the two large circles might be placed otherwise if desirable. If an occasional attendance higher than 60 be expected—suppose 70—the desks should be 10 feet long, and have their ends placed against the wall, leaving no passage.

Fig. 2



The next example shall be a room of  $21 \times 14$  feet, which is about the smallest size used as a school-room. There should be four desks of 8 feet long, and they should be placed against one side wall, leaving draft space 6 feet wide by the other. This room will accommodate an average of 37, but 48 can be taught with the present arrangement.



If the school-room be very large, it may be more convenient to place the desks in the middle, leaving draft space all round. And if even with this arrangement the desks would still be very long, there might be a passage through the middle, as in the principal room of the Central Model Schools. These remarks are sufficiently intelligible without diagrams.

(N. B.—In the following diagrams the draft circles are omitted, but their positions are indicated by the capital letter C placed in the centre of each.)

On the supposition that there are no galleries, in other words, if the pupils are to be taught either sitting in desks or standing at draft circles, the plans now given are the best that can be adopted for schools severally so circumstanced. In all these cases, it has been supposed that the desks might be had of any required length, as if about to be made newly. In numerous instances, however, the problem for the teacher is not to plan new desks, but to arrange in the best possible manner desks already made. The following examples are given to show how old desks of a given length may be arranged; the room is supposed in all cases to be 32 feet long by 16 broad, but the instructions that follow can be applied without difficulty to a room of any dimensions. This room will accommodate 64 average attend-

ance, requiring desk room for 35 or 40; and there must be at least four draft circles. Suppose first the desks to be 12 feet long; either four or five of them will be required, and they may be arranged in any one of the four ways represented in figs. 4, 5, 6, and 7. The most suitable arrangement of the four will be determined chiefly by the positions of the door, fire-place, and windows. In the diagrams a desk is represented by a heavy line, and its form by a light one.

Fig. 4.

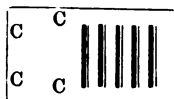


Fig. 5.

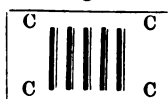


Fig. 6.

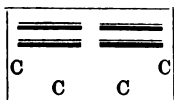
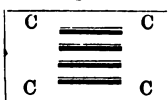


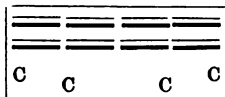
Fig. 7.



If the desks be either 10 or 11 feet long, there must be five of them, and they should be arranged across the room with their ends against one side wall, as in fig. 3. There will be draft space by the other wall and at one end. If they be 9 feet long, six will be necessary, and they may be placed either with their ends against the wall, as in fig. 3, or so as to leave a passage as in fig. 1; there will be draft space along one side wall and at one end. Six desks of 8 feet long would be required, and they should be placed as in fig. 1. If they be 7 feet long, there must be seven: place them as in fig. 1. Lastly, if the desks be 6 feet long, there must be either eight or nine of them, and there are several arrangements that would answer. Eight of them might be placed along the middle of the floor, leaving draft space 5 feet broad along both side walls. But perhaps the following plan, which is in

itself a very good way of arranging desks, will be considered better.

Fig. 8.



#### 6. USE OF GALLERIES IN BIPARTITE SYSTEM.

In the bipartite system, the pupils of one division are standing round the room at an oral lesson, while those of the other division are supposed to be sitting in desks at silent work. For reasons which will appear in the next chapter, however, it will be sometimes necessary during the day that both divisions (one standing and the other sitting) be receiving oral lessons at the same time. As the desks are not well adapted for oral instruction, it will be exceedingly convenient (provided the room is large enough, compared with the attendance, to allow it) to have one or two small galleries that will hold one division, while the pupils of the other are standing round the room. These galleries may be made of forms (as described in last chapter), and can be put up at a very small expense, sometimes without any expense at all. Any one of these four arrangements then will be found very useful, and each one more so than those that follow:—

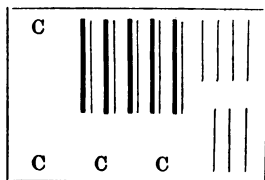
1. Two galleries, one large enough for an entire division, the other for half a division.
2. Two galleries, each sufficiently large for half a division.
3. One gallery, large enough to accommodate a division.
4. One small gallery for half a division.

If the room be too small to admit of even one gallery, the business can be carried on, as described at the end of this section, without it.

The pupils of one entire division are usually either

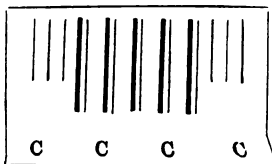
too numerous, or too unequal in proficiency to be taught together; it is generally necessary to divide them into two parts at the gallery lessons—hence the use of two galleries. If one of them be large enough for an entire division, the pupils may be taught either in two parts or all together, according as the teacher wishes on each particular occasion. If, however, the attendance be large—suppose 80 or above—it will be unnecessary to have either of the galleries so large as to accommodate a division, as such a number can scarcely ever be taught together. Some plans shall now be given showing the manner of arranging desks with one or more galleries; the exact mode of working the school in accordance with this furniture arrangement, will be described in the chapter on time-tables. Fig. 9 is the plan of the following national schools, among others: Edgeworthstown and Stonepark, Co. Longford; Cavan; Tullahanstown, Co. Meath. Where there can be two galleries, this is generally the best arrangement.

Fig. 9.



Another method of placing two galleries is shown in fig. 10, which is the plan of Longwood national school, Co. Meath; of Balyna national school, Co. Kildare; and of Darver national school, Co. Louth.

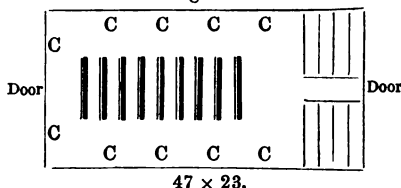
Fig. 10.





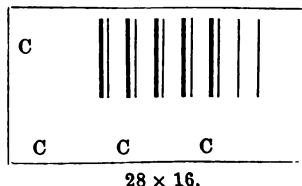
A larger school, both as to dimensions and attendance, than any of the foregoing, is Dundalk No. 2. The galleries in this were made of eight old desks, which were rejected, as there was a sufficient number without them; these were real galleries, with seats raised from the floor one behind another, and they were placed so that the children, when sitting in them, were turned towards the school-room.

Fig. 11.



Ardagh National School, Co. Longford, may be taken as the type of a very numerous class of rural schools. Its dimensions are 28 × 16 feet; average attendance 40, but there are often as many as 65 or 70 present. There was barely room enough for one gallery, and even that, only by making the seat of the last desk serve also for one of the seats of the gallery. The gallery consisted of only three seats (that is, two with the seat belonging to the desk), on which from 20 to 24 children could sit at a lesson. This furniture arrangement is particularly recommended for its simplicity, its usefulness, and its very general applicability to schools of about the same size and attendance. Even one form placed behind the last desk (if there be not room for two) will be found extremely useful.

Fig. 1 .



The arrangements represented in the last twelve diagrams, do not exhaust the subject; there are many other plans that might be adopted in exceptional cases, but those now given are generally the best under the circumstances. The galleries have been all along supposed to be in the school-room; it will greatly enhance their value if they be in one or more class-rooms, but in this case the arrangement of furniture is so simple, as to need no special description.\*

\* To show at what a trifling expense important changes may be effected in school furniture, and thereby to encourage teachers in the endeavour to have their schools improved, we give the actual cost incurred in some of the cases referred to in the preceding pages. Stonepark, Co. Longford. Four desks fitted with slate apertures, and furnished newly with horizontal boards, and front boards; iron feet of desks sunk six inches into floor (clay), to make them low enough, and thereby firmly fastened (this done by teacher himself); two galleries of forms fastened down by sleepers; walls furnished with three rows of tablet-rails; cap-rack put up.

Materials, . . . .	£0 15 0
Workmanship, . . . .	2 0 0

Total cost, . . . £2 15 0

Darver, Co. Louth. Seven desks fitted with slate apertures, and fastened down to floor (clay) by means of sleepers; two galleries of forms also fastened; tablet-rails.

Total cost, . . . £0 16 7

Dundalk, No. 2. Twelve desks fitted with slate apertures, and nailed down to floor (boarded); two excellent raised galleries, made of old desks, and furnished with gangways, side rails, &c. Only a few new boards had to be bought, and the work was done plainly and substantially. The circles were marked out by me, and painted by one of the monitors.

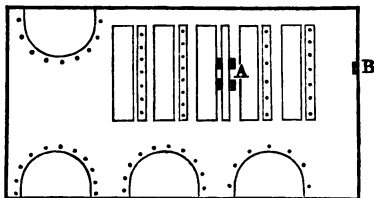
Total cost, . . . £2 15 0

Dundalk, No. 1. Seven desks fronted and fitted with slate apertures; desks and forms (which were separate) fastened to floor (clay) by sleepers; two galleries of forms, fastened also by sleepers; walls furnished with tablet-rails; cap-rack. The teacher himself, assisted by the grown boys, fastened down the desks and galleries, marked the circles, and otherwise assisted the carpenter.

Materials, . . . .	£1 1 6
Workmanship, . . . .	1 10 0

Total cost, . . . £2 11 6

If a school-room admit either of no gallery at all, or of only one, it will sometimes be necessary, as already remarked, to teach a lesson on some subject requiring direct oral instruction, to a class of children sitting in desks. We shall suppose this lesson to be geography, but our arrangements will answer any other subject. The best way to arrange the pupils in the desks is to place them with their faces turned contrary to the usual direction, hanging a map immediately before them. It will be better that those receiving the same lesson, occupy only two—certainly not more than three—desks. Even with three, those who sit on the third are too far from the map and from the teacher, and it will be found difficult to keep up their attention, especially as active teaching is going on at the same time in different parts of the room. A class of about sixteen can sit in two desks of 8 or 9 feet long. The map must not be placed less than  $2\frac{1}{2}$  or more than 3 feet from the front rank; it may be hung on an easel placed with its legs on each side of the seat of the next desk. If there be one gallery, one-half of the division (whenever it is divided) is placed in it, and the other half in the desks in the manner described: this arrangement is adapted to the school represented in fig. 12. If there be no gallery, and if the division at geography be divided into two parts, the following will be the disposition of the school; the children are represented by dots. At A is placed the easel for one map, its four legs shown by four little black squares. The second map is hung on the wall at B, and for this purpose the seat of the last desk is placed within about 3 feet of the wall. This arrangement of pupils will answer for the schools planned in figs. 1 to 8, inclusive.

*Fig. 13*

25 x 16.

If there be no easel, its place may be supplied by a stand, very easily made of a piece of common deal, about 8 feet in length, and provided with one or two cross pieces about 18 inches or 2 feet long, to keep the map steady. It should be studded with nails about 8 inches apart, for hanging maps at any required height; their heads should project a quarter of an inch, and no more. A rectangular aperture is made in the form of the desk where the stand is to be placed, and a corresponding one in the floor beneath; with its lower extremity inserted through the upper aperture and resting in the lower, it will stand quite firmly. It should not be quite perpendicular, but should incline at top slightly *from* the class; this will make the map hang steadily. When not in use, the stand may be taken up and laid aside.

#### TRIPARTITE OR THREE-PART SYSTEM.

##### 7. DIVISION OF PUPILS; FURNITURE ARRANGEMENTS.

The bipartite system, and the house arrangements suited to it, have now been fully detailed; a much shorter description will be sufficient to render intelligible the tripartite system, and the manner of arranging and carrying on the school in accordance with it. The pupils, as the name implies, are divided into three parts,

which may be called junior, middle, and senior division, respectively; at each lesson, during the entire day, the three divisions are engaged at lessons in the three compartments of the school, floor, desks, and gallery, and at the end of each lesson they all change places and subjects. This system is not so simple as the bipartite, and it is not suitable to small schools; but where there is an attendance of 50, or upwards, and where other circumstances are favourable, it may be introduced with great advantage. It will scarcely be possible to carry it out successfully unless there are three teachers, viz., either two monitors, or an assistant and a monitor, with the head teacher.

All that was said in connexion with the bipartite system on the subject of the division of pupils, applies with slight variation in the present case. The three divisions should be maintained as nearly equal as possible throughout the year, but the transfer of whole drafts from one division to another should be as far as possible avoided. It will be better, though not always practicable, that the divisions consist of the same number of drafts; in a school of 80, for example, each might contain three drafts. As this is not of primary importance, no sacrifice should be made in any of the arrangements in order to attain it. The particular drafts or classes that go to form the different divisions, depend entirely on the circumstances of the school. As an example, we give the division adopted in Dundalk boys' No. 3, national school, where this system was introduced.

JUN. Div.	. 3rd drft. of 1st.	2nd of 1st.	1st of 1st.	3rd of 2nd.
MID. Div.	. 2nd drft. of 2nd.	1st of 2nd.	2nd of seq.	1st of seq.
SEN. Div.	. 2nd drft. of 3rd.	1st of 3rd.	Fourth.	

The bipartite system can be carried on with desks and draft circles only, but for the tripartite, a gallery of some kind, either in the school-room, or in a class-room, is indispensable. There must be desk accommodation for one-third of the greatest number of pupils present, draft circles for a third, and one or more galleries for a third also, leaving in each case a little more room than is absolutely necessary, to provide for fluctuations in the attendance, and for accidental inequalities in the divisions. If the attendance be not over 60, one gallery may answer; but it would be desirable in all cases to have two (though both need not necessarily be always used), for which there are two sufficient reasons; first, if the attendance be large, one-third of the pupils will form a gallery class too unwieldy to be taught effectively; second, it is difficult to find subjects for the gallery lessons, so general in their nature, as to suit in every case all the pupils that form a division. The galleries may be in one or more detached class-rooms, or in the principal school-room, or one may be in a class-room and the other in the school-room. If they be both in the school-room, the plans given in figs. 9, 10, and 11 are among the best that can be adopted, for these furniture arrangements will suit either the bipartite or the tripartite system. If there be two class-rooms, one of them at least should have a gallery large enough for one entire division; the furniture arrangement on this supposition is shown in fig. 14. If there be only one class-room, it should also afford room for a division; fig. 15 shows the arrangement if there be two galleries, a large one in a class-room, and a small one (which may consist of a few forms) in the school-room. In these two cases, the division for the gallery may be either divided into two parts, or taught all together, according to circumstances. If there be only one gallery, whether in the school-room or in a class-room, the arrangement is so simple as to require no diagram. There may be many other modifications; but any intelligent teacher, who reads this chapter attentively, will find little diffi-

culty in determining the plan best adapted to his own school.

Fig. 14.

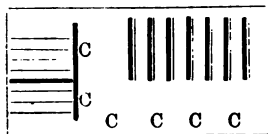
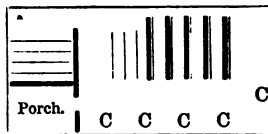


Fig. 15.



#### QUADRIPARTITE OR FOUR-PART SYSTEM.

##### 8. DESCRIPTION AND FURNITURE ARRANGEMENTS.

This system differs in several respects from both the bipartite and tripartite, but it is a modification of the former; it is adapted to large schools, especially if there be a class-room, and where it can be carried out, it will be found as effective as either. It is the system adopted in the principal school-room (boys') of the Central Model School, Dublin; but before its adoption here, it was introduced with success into the National Schools of Cavan, Mohill, and Dundalk.

The main features of this system are the following:—*First*; the pupils are divided into four parts, and as in the other systems, the divisions must be preserved equal or nearly so. If there be eight drafts in the school, each division will contain two; if there be twelve, each will consist of three. In the principal Central Model School there are 24 drafts, and there are six in each division. Where such a systematic disposition of drafts can be carried out, it will work extremely well. But if the number of drafts in the school be not a multiple of four, the divisions cannot contain all the same number, which, however, though desirable, is not necessary. To keep the divisions equal is a matter very easy to accomplish, but still it requires the teacher's attention. *Second*; with regard to the positions and movements of the divisions, the pupils of two divisions

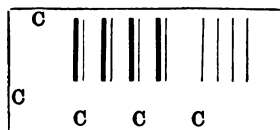
(half the entire school) are at draft lessons round the room at the same time, but at the other lessons the same two divisions separate, one going to the desks and the other to the gallery; at the next desk-and-gallery lesson for the same two divisions, their positions are reversed, the division that sat last time in desks now taking the gallery, and *vice versa*. At every lesson during the day, therefore, the pupils are disposed in the following manner: half are standing round the room, one-fourth are sitting in desks, and one-fourth in gallery; and at the movement after each lesson, the two divisions that have been on the floor separate into desks and gallery respectively, while the two that have been in desks and gallery now both stand round the floor to the draft circles. The following scheme will render this still clearer:—

	1st division.	2nd division.	3rd division.	4th division.
1st lesson.	Gallery.	Desks.	Floor.	
2nd "	Floor.		Gallery.	Desks.
3rd "	Desks.	Gallery.	Floor.	
4th "	Floor.		Desks.	Gallery.
5th "	Gallery.	Desks.	Floor.	
6th "	Floor.		Gallery.	Desks.
7th "	Desks.	Gallery.	Floor.	
8th "	Floor.		Desks.	Gallery.



On the supposition that there are eight lessons—and this should always be the case when the present system is adopted—it will be seen that each draft receives altogether, during the entire day, two lessons in desks, two in galleries, and four at the draft circles. *Third*, with respect to house arrangements; there must be draft space enough for half the whole attendance; as many desks as will accommodate a fourth, and a gallery (or two) to hold a fourth. In the arrangement of the furniture there may be much variety. One gallery will be generally sufficient, which may be either in the school-room, or, what is far better, in a class-room. But if the attendance be very large, two may be required, especially if there be no class-room. If there be a class-room containing a gallery, the furniture arrangement is so simple that it needs no description. If there be no class-room, the gallery must be in the school-room, and its position will of course depend on the construction of the room. The best place generally, however, is behind the desks, as shown in fig. 16, for with this arrangement, the gallery pupils are to a great extent isolated from the rest of the school. Of all the systems of organization, this requires the smallest amount of furniture.

Fig. 16.



36 x 16.

## CHAPTER III.

### TIME-TABLES.

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#### 1. GENERAL PRINCIPLES.

A TIME-TABLE is to a school what grammar is to a language. In the first instance, the circumstances of the school determine the construction of the time-table, but once determined, the business should be afterwards carried on entirely in accordance with it. If it be faithfully adhered to, the success of the school depends in a great measure on its suitability. The subject is, therefore, of much importance—one with which every teacher should be thoroughly conversant; we shall accordingly treat it in some detail, first laying down a few general principles, and afterwards giving a sufficient number of examples.

That it is the teacher's duty to abide by his time-table, every one is ready to admit; yet it is well known that many teachers depart widely in practice from the routine they have themselves laid down; and that there are some schools in which the time-table is altogether ignored, the business being carried on quite independent of it. Instances of this last kind are, however, becoming less numerous every year, as teachers are advancing in skill and intelligence. Non-adherence to the time-table is not always the result of wilful negligence; it is frequently caused by injudicious arrangements, for in order that the teacher may be able to follow his time-table, *it must be skilfully constructed, and well suited to the school.*

A time-table should be simple, both in appearance and reality. It should be perfectly free from ambiguity; the subject as well as the place where it is to be taught, whether desks, floor, or gallery, should be specified for each class or division, at each period during the day.

A visiter walking in at any hour should be able, by looking at the time-table and at the clock, to tell whether each class is in the right place, and at the right employment. The time should be distributed among the subjects in proportion to their importance, the principal part of the day being devoted to reading, writing, and arithmetic.

The time-table for any individual school depends on a variety of circumstances; whether the system adopted be bipartite, or tripartite, or a modification of either; whether the school be male, female, or mixed; the proficiency of the children, &c. The most important of these shall be taken into account in the following specimens, and so many shall be given, that there is no ordinary national school which will not be suited by some one of them, either as it stands, or with some slight modifications. All the time-tables given here were drawn out for different national schools, during the writer's progress as organizer through the central counties of Ireland; they were all tried for a sufficiently long time before final adoption, and were ultimately carried out with success by the different teachers.

In all these time-tables, the lessons are uniformly half an hour in length. This arrangement possesses advantages which, in our opinion, render it superior to any other subdivision of time. In the first place, it is recommended by its simplicity. A uniform change of lessons at the hours and half hours precludes all possibility of mistake or neglect; every child knows when the lesson terminates, and the whole school, teacher, monitors, and pupils, are always prepared for the change. In the second place, if the children really work through the whole time, if their minds, or fingers, or both, be kept in a state of continuous activity, half an hour is quite long enough for a lesson. Those subjects that require more than one half hour's teaching per day are taken up a second, or, if necessary, a third time; *two half hour lessons on reading or arithmetic, separated by an interval, are better than one lesson an hour in length.* This

half hour division, however, is suited only for schools in which discipline is well maintained, and where the lesson-changes do not occupy more than one or two minutes.

The time for secular instruction is generally either  $4\frac{1}{2}$  or 5 hours, which, after subtracting half an hour for play, gives in the one case 4, and in the other,  $4\frac{1}{2}$  hours clear for teaching purposes. We shall suppose this divided into eight parts; if the time be 4 hours, each lesson will be just half an hour long; if it be  $4\frac{1}{2}$  hours, some will be longer. In this latter case, many might prefer to divide the time into nine parts of half an hour each. The time for religious instruction depends on the circumstances of the individual school; the time-tables that follow will allow its being carried on at any period during the day, by making the necessary changes in the time column. If there be religious instruction every day, it ought to be mentioned at the proper time among the secular subjects. We have supposed secular instruction to commence at 10 o'clock, and to terminate at  $2\frac{1}{2}$  o'clock; but if the time for beginning, or ending, or both, be different in any particular school, the necessary alterations can be made without difficulty.

If there be eight lessons during the day, and on the supposition that there is no gallery, each of the two divisions will receive four lessons in the desks, and four at the draft circles. The subjects suited to draft teaching for senior division, are (1), reading (including spelling and explanation); (2), arithmetic; (3), examination of home lessons (or "tasks"); (4), grammar; and (5), geography. The desk subjects (that is, "silent lessons"—those that properly belong to the desks) are writing, writing from dictation, arithmetic (as a desk lesson; see Part II., chap. IV.), drawing, and lesson exercises.\* There are, then, five draft subjects, which may be counted as six, if there be two reading lessons, while

\* That is, written exercises on any of the oral lessons already learned, in grammar, geography, lesson books, &c.

the division can occupy the circles only four times. It is evident, therefore, that either one or two of these subjects will have to be taught in desks (the children being placed as described in page 30), or in galleries. As the desks are at best not well suited for this kind of teaching, the utility of one or two small galleries will be at once apparent. The same conclusion would be arrived at, and with still stronger reason, if the desk and floor subjects of the junior division were examined in a similar way. In the time-tables that follow, the places where the lessons are taught are in all cases mentioned; F stands for floor or drafts, D for desks, and G for gallery. This G will be retained, even on the supposition that there is no gallery, and in this case the lessons marked G will be taught in desks, the children being placed as described in page 30.

#### TIME-TABLES FOR BOYS' SCHOOLS.

##### 2. BIPARTITE.

Time-table No. 1 is suitable for the great majority of ordinary boys' schools, whatever may be the attendance, or the number of teachers. It will answer any of the furniture arrangements from fig. 1 to fig. 13, last chapter, but it can best be carried out where there are galleries, as in figs. 9, 10, 11, and 12. If there be some boys learning extra branches, it will not be difficult to find time for them. Geometry, algebra, or mensuration, might be taught during a portion of the weekly time for arithmetic, or perhaps during a part of the home lesson time. Book-keeping might come in twice a week at the time for dictation, or, if the boys be already good writers, at the time for writing. "Lesson exercises" might be sometimes substituted with advantage for dictation, and should the teacher wish, an "object lesson" might occasionally be given to the junior division at the third lesson, instead of "mental arithmetic and tables." "Inspection of cleanliness," "play," and "monitors' class extra instruction," are inserted in No. 1, but, for

the sake of brevity, they will be omitted from the others. The time for calling rolls might also be mentioned, if it be thought necessary to set apart a special time for it. Full instructions for carrying out this time-table are given in the two last sections of this chapter.

TIME TABLE, No. 1.

TIME.		JUNIOR DIVISION.		SENIOR DIVISION.	
From	To	First Class and Second draft of Second.*		First draft of Second, Sequel, and Third.*	
9-55	10	Inspection as to cleanliness.			
10	10½	Arithmetic, M. Tu. W. Dictation, Th. Fr.	D	Home Lessons.	F
10½	11	Reading and Home Lessons.	F	Arithmetic.	D
11	11½	Ment. Arith. and Tables.	G	Reading.	F
11½	12	Reading.	F	Writing.	D
12	12½	Play.			
12½	1	Geography.	G	Arithmetic.	F
1	1½	Arithmetic.	F	Dictation. (Geography, Wed.)	D
1½	2	Writing.	D	Reading.	F
2	2½	Reading.	F	Grammar, M. Tu. W. Geography, Th. Fr.	G
2½	3½	Extra instruction for Monitors' class.			

\* The drafts composing each division depend, of course, on the school.

If the time for secular instruction be half an hour longer than is here supposed, the following time column may be used instead of the one given:—(10-10·5), (10·5-10·40), (10·40-11·15), ( $11\frac{1}{4}$ - $11\frac{3}{4}$ ), ( $11\frac{3}{4}$ - $12\frac{1}{4}$ ), ( $12\frac{1}{4}$ - $12\frac{3}{4}$ ), ( $12\frac{3}{4}$ -1·20), (1·20-1·55), (1·55-2 $\frac{1}{2}$ ), (2 $\frac{1}{2}$ -3), (3-4).

It is generally best to examine the home lessons first in the morning, for otherwise the pupils are likely to be rehearsing them when they should be at other business. In some schools, however, the teachers complain that the home lessons are lost to many of the pupils, who arrive after 10 o'clock, some perhaps by design to escape them; and these teachers accordingly prefer to begin with some other lesson. Time-table No. 2 is constructed to meet this difficulty; it is the same as

TIME TABLE, No. 2.

TIME.		JUNIOR DIVISION.		SENIOR DIVISION.	
10	10 $\frac{1}{2}$	Reading and Home Lessons.	F	Arithmetic.	D
10 $\frac{1}{2}$	11	Arithmetic, M. Tu. W. Dictation, Th. Fr.	D	Home Lessons.	F
11	11 $\frac{1}{2}$	Reading.	F	Writing.	D
11 $\frac{1}{2}$	12	Ment. Arith. and Tables.	G	Reading.	F
12 $\frac{1}{2}$	1	Arithmetic.	F	Grammar, M. Tu. W. Geography, Th. Fr.	G
1	1 $\frac{1}{2}$	Writing.	D	Arithmetic.	F
1 $\frac{1}{2}$	2	Reading.	F	Dictation. (Geography, Wed.)	D
2	2 $\frac{1}{2}$	Geography.	G	Reading.	F

No. 1, only with the subjects arranged in a different order, and it will answer the same description of schools.

If any teacher think three lessons per week not sufficient for grammar for the senior division, let him devote to it one of the two reading half hours on one day of the week, suppose Friday. This will be indicated in either of the two preceding time-tables, by inserting "Reading (Gram. Frid.)," instead of the single word "Reading."

If singing be taught, time may be allowed for it in a variety of ways. For instance, it may be introduced into No. 2, by adding this note at the foot, which will allow three half hours per week for it:—"Singing for the whole school from  $1\frac{1}{2}$  to 2 o'clock on Monday, and from 2 to  $2\frac{1}{2}$  on Wednesday and Friday." In addition to this, the pupils might also sing as they march from place to place at the lesson-changes.

Should the teacher wish to introduce drawing, the following time-table will answer, allowing for this subject three half hours per week for the senior division, and five for the junior. If the junior division be not engaged at drawing, let the left hand half of the time-table be filled up the same as in No. 1. It will be observed that in time-table No. 3, there is only one stated reading lesson per day for the senior division, which would be in itself too short. The pupils, are, however, expected to get some practice at reading\* during the time for home lessons. Part of the time for grammar can also be spent at reading, especially by the lower drafts of senior division, for which half an hour per day is too long to spend at the former subject.\* This time-table will answer the same description of schools as the two last.

\* See last section of this chapter.



TIME TABLE, No. 8.

TIME.		JUNIOR DIVISION.		SENIOR DIVISION.	
10	10½	Geography, M. Tu. W. Tables, Th. Fr.	G	Home Lessons and Reading.	F
10½	11	Reading and Home Lessons.	F	Writing.	D
11	11½	Arithmetic, M. Tu. W. Dictation, Th. Fr.	D	Arithmetic.	F
11½	12	Reading.	F	Dictation.*	D
12½	1	Drawing.	D	Grammar and Reading.	F
1	1½	Arithmetic.	F	Arithmetic. (Drawing, Wed.)	D
1½	2	Writing.	D	Reading.	F
2	2½	Reading.	F	Geography, M. Tu. W. Drawing, Th. Fr.	G D

## 3. TRIPARTITE.

In constructing a time-table for tripartite organization, the teacher must in the first instance consider whether there are to be eight or nine lessons in the day. If there be four hours for secular instruction (not including the half hour for play), there can be only eight; if there be 4½ hours, there may be either eight or nine. The two time-tables here given (No. 4 and

\* If thought desirable, another drawing lesson may be taken from dictation.

No. 5), one for eight lessons, the other for nine, will answer most schools organized on the tripartite system. Either of these can be easily modified by any teacher of intelligence, to admit of one or more lessons per week on drawing or singing, or both, for one or more of the divisions, in the same manner as has been done in the third time-table.

TIME-TABLE, No. 4 (EIGHT LESSONS).

TIME.		JUN. DIV.		MID. DIV.		SEN. DIV.	
10	10½	Dictation.	D	Ment. Arith. and Tables.	G	Home Lessons and Reading.	F
10½	11	Arithmetic.	G	Reading and Home Lessons.	F	Writing.	D
11	11½	Reading.	F	Dictation, M. Tu. W. Arithmetic, Th. Fr.	D	Grammar and Reading.	G
11½	12	Writing.	D	Reading and Gram.	G	Arithmetic.	F
12½	1	Geography.	G	Arithmetic.	F	Dictation.	D
1	1½	Reading.	F	Writing.	D	Geography. (Read poetry, Mon.).	G
1½	2	Arithmetic.	D	Geography. (Read poetry Mon.)	G	Reading.	F
2	2½	Spelling, M. Tu. W. Object Lesson, Th. Fr.	G	Reading.	F	Arithmetic.	D

## TIME-TABLE, No. 5 (NINE LESSONS).

TIME.		JUN. DIV.		MID. DIV. *		SEN. DIV.	
10	10½	Arithmetic, M. Tu. W. Reading, Th. Fr.	F	Reading poetry.	G	Arithmetic.	D
10½	11	Spelling, M. Tu. W. Object Lesson, Th. Fr.	G	Arithmetic.	D	Home Lessons.	F
11	11½	Arithmetic.	D	Reading and Home Lessons.	F	Reading poetry, M. Tu. W. Ment. Arith. Th. Fr.	G
11½	12	Reading.	F	Geography.	G	Writing.	D
12	12½	Geography.	G	Writing.	D	Arithmetic.	F
1	1½	Dictation.	D	Arithmetic.	F	Grammar and Reading.	G
1½	2	Reading.	F	Grammar M. Tu. W. Ment. Arith. Th. Fr.	G	Dictation.	D
2	2½	Arithmetic.	G	Dictation.	D	Reading.	F
2½	3	Writing.	D	Reading.	F	Geography.	G

## 4. QUADRIPARTITE.

The scheme figured in page 35 may be considered as a kind of general frame-work, on which a variety of time-tables may be constructed, the times and subjects being filled in, according to the circumstances of the school. No. 6 will be found to answer perhaps as well as any other.

TIME-TABLE, No. 6.

TIME.		FIRST DIVISION.		SECOND DIVISION.		THIRD DIVISION.		FOURTH DIVISION.	
10	10½	Mental Arith. and Tables.	G	Arithmetic, M. Tu. W. Dictation, Th. Fr.	D	Home Lessons.			F
10½	11	Reading and Home Lessons.			F	Dictation (Grammar, Wed.).	G	Arithmetic.*	D
11	11½	Arithmetic.	D	Mental Arith. and Tables.	G	Reading.			F
11½	12	Reading.			F	Arithmetic.	D	Dictation* (Grammar, Wed.).	G
12½	1	Geography.	G	Writing.	D	Reading.			F
1	1½	Arithmetic.			F	Geography, M. Tu. W. Grammar, Th. Fr.	G	Writing.	D
1½	2	Writing.	D	Geography.	G	Arithmetic.			F
2	2½	Reading.			F	Writing.	D	Geography, M. Tu. W. Grammar, Th. Fr.	G

## TIME-TABLES FOR MIXED SCHOOLS

## 5. BIPARTITE.

A mixed school, in which the girls do not learn needlework, is, so far as the time-table is concerned, the

\* These lessons might change places if the teacher preferred; same observation for 3rd division.

same as a boys' school: one of the preceding time-tables will answer. The only precaution necessary in this case is to put the boys and girls sitting in separate desks; and though they stand together at the floor lessons, still the girls should be at one side of the circle, and the boys at the other.

To construct a time-table for a mixed school in which needlework is taught, requires careful consideration. For while the girls are working, the boys continue at their ordinary lessons, and the time for work must be so arranged that this loss of literary instruction shall not be confined to one or two subjects, but shall be distributed among several. In some mixed schools, a work-mistress gives instruction in needlework for two hours; in others, there is a permanent female assistant, who teaches needlework for some short time each day, and assists in the general business for the rest of the time. In the former case, the best and most usual arrangement is to divide all the girls that work into two classes, each of which receives instruction for one hour. Time-table No. 7 is constructed on this principle; it will answer for a mixed school of any attendance.

The needlework arrangement is easily understood; the senior girls work the first hour, and the junior the second hour, for the first three days of the week, while the order is reversed on the remaining two days; during all this time, the boys continue at literary subjects. The following is the weekly loss of literary instruction sustained by the girls of each division:—

## GIRLS OF JUN. DIVISION.

8 Lessons in Writing.	
8	" Reading.
2	" Geography.
2	" Arithmetic.

## GIRLS OF SEN. DIVISION.

8 Lessons in Dictation.	
1	" Grammar.
3	" Arithmetic.
1	" Geography.
2	" Reading.

TIME-TABLE, No. 7.

TIME.		JUNIOR DIVISION.		SENIOR DIVISION.	
10	10½	Arithmetic, M. Tu. W. Dictation, Th. Fr.	D	Home Lessons and Reading.	F
10½	11	Reading and Home Lessons.	F	Arithmetic (Geography, Wed.).	D
11	11½	Mental Arithmetic and Tables.	G	Reading.	F
11½	12	Reading. .	F	Writing.	D
12½	1	Geography.	G	Arithmetic.	F
1	1½	Arithmetic.	F	Dictation.	D
1½	2	Writing.	D	Reading.	F
2	2½	Reading. .	F	Grammar, M. W. Fr. Geography, Tu. Th.	G

## NEEDLEWORK.

		Monday, Tuesday, Wednesday.	Thursday, Friday.
12½	1½	Girls of Senior Division.	Girls of Junior Division.
1½	2½	Girls of Junior Division.	Girls of Senior Division.

If there be a permanent female assistant who teaches needlework for one hour only, either to the whole of the girls, or to a class chosen promiscuously from among the different drafts, the same time-table can be used,

only with the addition of the following simpler needlework arrangement, instead of the one given:—

NEEDLEWORK.	
$12\frac{1}{2}$ to $1\frac{1}{2}$ ,	Monday, Tuesday, and Wednesday.
$1\frac{1}{2}$ to $2\frac{1}{2}$ ,	Thursday and Friday.

This means that the girls of the sewing class work from  $12\frac{1}{2}$  to  $1\frac{1}{2}$  on the first three days of the week, and from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  on the last two: if there be girls who do not work, they remain at the ordinary school business with the boys.

## 6. TRIPARTITE.

In time-table, No. 8, the girls work for two hours. They should be divided into two classes, one elementary, and the other advanced; and it is a matter of no great consequence where the separating line runs, or whether the two needlework divisions coincide with the ordinary school divisions or not. If needlework be taught only for one hour to a single selected class of girls, the same time-table (No. 8) will answer equally well, by adding the following needlework arrangement instead of that given:—

NEEDLEWORK.		
$12\frac{1}{2}$	$1\frac{1}{2}$	Monday, Tuesday, and Wednesday.
$1\frac{1}{2}$	$2\frac{1}{2}$	Thursday and Friday.

TIME-TABLE, No. 8.

TIME.		JUN. DIV.		MID. DIV.		SEN. DIV.	
10	10½	Dictation.	D	Mental Arith. and Tables.	G	Home Lessons and Reading.	F
10½	11	Arithmetic.	G	Reading and Home Lessons.	F	Writing.	D
11	11½	Reading.	F	Writing.	D	Grammar and Reading. (Geography, Mon.).	G
11½	12	Writing.	D	Geography. (Grammar, Mon.)	G	Arithmetic.	F
12½	1	Geography.	G	Arithmetic.	F	Dictation.	D
1	1½	Reading.	F	Dictation.	D	Geography. (Grammar, Mon.).	G
1½	2	Arithmetic.	D	Reading and Grammar. (Geography, Mon.)	G	Reading.	F
2	2½	Spelling. M. Tu. W. Object Lesson, Th. F.	G	Reading.	F	Arithmetic.	D

## NEEDLEWORK.

TIME.		Monday, Tuesday, Wednesday.	Thursday, Friday.
12½	1½	Advanced Class.	Elementary Class.
1½	2½	Elementary Class.	Advanced Class.



## TIME-TABLES FOR GIRLS' SCHOOLS.

## 7. BIPARTITE.

Time-tables for girls' schools admit of much variety, in consequence of the different arrangements for teaching needlework. In some schools it is taught for two hours every day, in others for only one; in some the girls all work together, in others in successive classes; in one school there is a workmistress, and almost all the pupils are taught to work; in another, the needlework is taught by the principal teacher, and a comparatively small number of the girls are employed. It would be impossible to meet all these varieties here, but a few time-tables shall be given, which will include the most important and most generally adopted arrangements.

Time-table, No. 9, will answer for any female school

TIME-TABLE, No. 9.

TIME.	JUNIOR DIVISION.		SENIOR DIVISION.	
10-10½	Reading and Home Lessons.	F	Dictation (Grammar, Wed.).	D
10½-11	Dictation.	D	Home Lessons and Reading.	F
11-11½	Arithmetic.	F	Writing.	D
11½-12	Writing.	D	Arithmetic.	F
12½-1	Reading.	F	Geography, M. Tu. W. Grammar, Th. Fr.	G
1-1½	Arithmetic and Tables.	D	Reading.	F
1½-2	Geography, M. Tu. W. Reading, Th. Fr.	F	Needlework.	D
2-2½	Needlework.	D		

in which needlework is taught for one hour, and in which the whole time for secular instruction (not including the interval for play) is four hours. The senior girls work for an hour, and the junior for half an hour. If any of the girls are unable to join in the needlework, from the accidental want of materials, or from any other cause, they should be sent to some literary business, such as arithmetic, writing, &c.; this observation applies generally to female schools.

If the time for secular instruction were  $4\frac{1}{2}$  instead of 4 hours, the time-table could be made in several respects better than the above. No. 10 is constructed on this supposition.

TIME-TABLE, No. 10.

TIME.	JUNIOR DIVISION.		SENIOR DIVISION.	
10-10½	Arithmetic, M. Tu. W. Dictation, Th. Fr.	D	Home Lessons and Reading,	F
10½-11	Reading and Home Lessons.	F	Dictation, M. Tu. W. Arithmetic, Th. Fr.	D
11-11½	Mental Arithmetic and Tables.	G	Reading.	F
11½-12	Reading.	F	Writing.	D
12-12½	Writing.	D	Arithmetic.	F
1-1½	Arithmetic.	F	Geography, M. Tu. W. Mental Arith. Th. Fr.	G
1½-2	Geography.	G	Grammar and Reading.	F
2-2½	Reading.	F	} Needlework.	D
2½-3	Needlework.	D		

If it be thought desirable that the last hour should be exclusively devoted to needlework by both divisions, either of these two time-tables can be easily modified to admit of this. Thus, in No. 9, omit altogether the last literary lesson of junior division; and in the last but one (1 to 1½), instead of "Arithmetic and Tables," write "Geography, Mon. Tu. Wed.—Tables, Th. Frid.," and this change will be sufficient. No. 10 could be modified with as little difficulty.

If needlework be taught for two hours, each division working for one hour in turn, the following modification of No. 9 may be used: secular instruction is supposed to continue for four hours. If the time were 4½ hours, No. 10 might be similarly modified, and the resulting time-table would be still better.

TIME-TABLE, No. 11.

TIME.	JUNIOR DIVISION.		SENIOR DIVISION.	
10-10½	Reading and Home Lessons.	F	Dictation (Grammar, Wed.).	D
10½-11	Dictation.	D	Home Lessons and Reading.	F
11-11½	Arithmetic.	F	Writing.	D
11½-12	Writing.	D	Arithmetic.	F
12½-1	Needlework.	D	Geography, M. Tu. W. Grammar, Th. Fr.	G
1-1½			Reading.	F
1½-2	Reading.	F	Needlework.	D
2-2½	Geography, M. Tu. W. Tables, Th. Fr.	G		

## 8. TRIPARTITE.

The construction of a tripartite time-table for a girls' school depends on a variety of circumstances, but only one case shall be supposed:—Total time for secular instruction (not including play),  $4\frac{1}{2}$  hours; the girls work together, the senior and middle divisions for one hour, and the junior for half an hour. These suppositions are embodied in No. 12.

TIME-TABLE, No. 12.

TIME.		JUN. DIV.		MID. DIV.		SEN. DIV.	
10	10½	Dictation..	D	Home Lessons and Reading.	G	Home Lessons and Reading.	F
10½	11	Reading.	F	Dictation, M. Tu. W. Arithmetic, Th. Fr.	D	Geography, M. Tu. W. Mental Arith. Th. Fr.	G
11	11½	Spelling, M. Tu. W. Tables, Th. Fr.	G	Reading.	F	Writing.	D
11½	12	Writing.	D	Geography, M. Tu. W. Tables, Th. Fr.	G	Arithmetic.	F
12	12½	Arithmetic.	F	Writing.	D	Grammar and Reading.	G
1	1½	Geography.	G	Arithmetic.	F	Dictation, M. Tu. W. Arithmetic, Th. Fr.	D
1½	2	Arithmetic.	D	Reading and Grammar.	G	Reading.	F
2	2½	Reading.	F	Needlework.	D	Needlework.	D
2½	3	Needlework.	D				

# METHOD OF WORKING SCHOOL ACCORDING TO TIME-TABLE.

## 9. ANALYSIS OF No. 1; DISTRIBUTION OF TEACHER'S TIME,

According to time-table No. 1, the pupils of senior division receive altogether four lessons at the draft circles, three in the desks, and one in galleries; those of junior, four at the draft circles, two in desks, and two in galleries. The word galleries, as already explained, denotes that the lessons so marked are taught either in real galleries, or in desks as described in page 30. The number of half hours devoted weekly to each subject is shown in the following table; Saturday is not included:—

	Read.	Writ.	Dict.	Arith.	Gram.	Geog.	H. Les.	Total.
SEN. DIV.	10	5	4	10	3	3	5	40
JUN. DIV.	15*	5	2	13		5		40

The following instructions relate to time-table, No. 1, but they will apply, with slight alterations, to all the others. In order to be quite clearly understood, we shall suppose a school, in which the junior division consists of the whole of the first class (in two drafts), and of the second or low draft of second class; and the senior division, of the third class, sequel class (each forming one draft), and first draft of second: three drafts in each division. In a school like this, large enough to form six drafts, there is generally a paid monitor; this is supposed to be the case here, but the time-table may be carried out without one, though of course much less effectively.

\* Including a short time at grammar and home lessons, for any drafts of the junior division that may be engaged at these subjects.

The labours of a teacher in a school are chiefly twofold, teaching and superintending. In the performance of this double duty, there are two extremes which he must carefully avoid; on the one hand, allowing himself to be totally absorbed in teaching a succession of single classes, without sufficiently attending to the rest of the school; and, on the other, wasting his time in constant superintendence, and teaching little or none. When a lesson commences, he should not at once drop into his class and begin to teach, as if he felt no interest in what is going on in the other classes; this is a fault to which zealous and conscientious teachers are sometimes liable, from their extreme anxiety to be constantly employed in teaching. Immediately after the divisions have changed places, his first duty is to go round to the drafts and classes one by one, to see that each is at the proper subject or lesson, and, if necessary, to give some directions, or speak a few words of encouragement to the pupils or monitors. This most important duty will generally not occupy more than four or five minutes, and then the teacher has always the satisfaction of knowing exactly what all are doing, and the certainty that nothing goes wrong. During this time his own draft should not remain idle; it should be conducted till his return by one of the principal boys.

But the other extreme, spending the whole or a considerable part of the day in merely superintending, is far more pernicious in its effects and tendencies, both on the teacher and on the school. A teacher addicted to this is constantly employed in visiting the drafts in succession, teaching or questioning a few minutes in each, and sometimes merely listening, but he scarcely ever teaches a continuous lesson. This kind of employment is little better than downright idling, for though the teacher *appears* to be very busy, he is really doing almost nothing; even with the very best intentions, such disconnected scrap teaching only fritters away his time, and never turns to any profit. A teacher might divide his time between two classes during a lesson; whether

he do this, or remain altogether with one, depends on the nature of the lesson, as well as on several other circumstances, and must be decided on each particular occasion by his own judgment. But he can hardly teach in more than two classes within one half hour, without approaching too nearly to the wretched practice already described. As he will have to confine himself to one or two drafts of the division during the half hour, he must be careful to teach the other drafts at another time, and in general so to distribute from day to day his teaching among the different drafts and classes, that more time and attention shall not be bestowed on any one than is justly due to it. Above all, he must carefully avoid the gross injustice of confining himself exclusively to one or two head classes, and abandoning the junior children altogether to the care of monitors.

Within the time of one lesson, the teacher should not change from one division to another, except merely for the purpose of a hasty visit, as already stated; if he change at all, it should be from one draft to another of the same division. It will be well if he follow some fixed rule in distributing his time between the two divisions. The following is perhaps as simple a plan as could be devised, and if the teacher adhere to it each of the two divisions will be sure to receive its due share of attention. This form (referring to time-table, No. 1) shows in which of the two divisions the teacher is engaged for every half hour in the entire week; it can be written out on a piece of card, and either hung near the time-table or kept in the teacher's pocket. It will answer whether there be a monitor in the school or not.

A similar form could easily be made out for any of the other time-tables. If there be one paid monitor or assistant, he should not, as a general rule (subject to occasional exceptions), be employed in the same division with the principal teacher. If there be more than one, their distribution is usually a matter of less difficulty, and may be left entirely to the teacher's judgment.

DISTRIBUTION OF TEACHER'S TIME.						
Time.		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
10	10½	Senior.	Senior.	Senior.	Senior.	Senior.
10½	11	Junior.	Junior.	Junior.	Senior.	Junior.
11	11½	Senior.	Junior.	Senior.	Junior.	Senior.
11½	12	Senior.	Junior.	Senior.	Junior.	Senior.
12½	1	Senior.	Senior.	Senior.	Senior.	Senior.
1	1½	Junior.	Senior.	Junior.	Senior.	Junior.
1½	2	Junior.	Senior.	Senior.	Senior.	Senior.
2	2½	Senior.	Senior.	Junior.	Senior.	Senior.

## 10. MANAGEMENT OF SCHOOL AT THE DIFFERENT LESSONS.

**9:55 to 10.** *Inspection as to cleanliness.*—At five minutes to ten, the children should be arranged according to their divisions and drafts, either in the playground or in the school-room; and the teacher, after a hasty glance to see that their hands, faces, and hair are clean and neat, marches all to their several places. This preliminary business should not encroach on the school time; the first lessons should be actually commencing at 10 o'clock.

**10 to 10½.** *Senior division, home lessons in drafts.*—The teacher first examines the pupils of one draft in the whole of their home lessons, next those of another, and so on, going from draft to draft till the half hour terminates. If the drafts be moderately large, he will scarcely be able to examine more than two; the remaining draft



may be examined by the paid monitor, who leaves the junior division temporarily for that purpose. The teacher should examine on to-morrow the draft examined by the monitor to-day. The pupils of those drafts, not immediately under examination, should be reading under the care of the head pupil or the best reader in each draft. In this way not one moment will be lost; every draft is employed the whole time, either at reading or home lessons. If the teacher wish to examine all the lessons every day himself, a good plan is to commence long before ten, and examine the pupils individually as they come in, stopping at five minutes before ten; those that remain he can easily examine within the half hour. All the home lessons of the senior division, without one exception, should be examined by half-past ten. (For method of examining, see "Home Lessons," Part II., Chap. V.)

*Junior division, arithmetic, or dictation in desks:* in charge of the paid monitor. This is a silent lesson, and the children work for themselves, requiring not so much teaching as superintendence and guidance. The monitor, after seeing that all are properly at work, might leave them for ten minutes in the middle of the half hour, to examine the home lessons in one of the drafts of senior division. If there be no paid monitor, the junior division must be placed in charge of a careful unpaid monitor, *whose home lessons should have been previously examined.* For mode of employing them on the arithmetic days, see Part II., Chap. IV.; for instructions how to carry out the dictation lessons, see Part II., Chap. III.

10½ to 11. *Senior division, arithmetic in desks.*—This is a silent lesson, and the pupils work for themselves out of books; they are superintended by the monitor every day except Thursday, when they are in charge of the teacher. They should all, without exception, be provided with arithmetics, from which to work at this time, and which they take out from their satchels or straps the moment they are seated. For method of

working, see Part II., Chap. IV. Every exercise should be examined when finished, the pupil holding up his hand as a signal, and the number worked should be registered in a corner of the slate. Two pupils who happen to be at the same exercise should not be allowed to sit next each other. Should any of the boys wish to write out accounts, bills of parcels, &c., this is the most natural time for this very useful exercise.

*Junior division, reading and home lessons in drafts.*—The teacher has charge of junior division at this hour every day except one; and as all three drafts must be going on at the same time, two unpaid monitors at least will be required to assist him. As home lessons are prepared only by the pupils of one of the drafts, and as they are besides very short, they can be examined in a few minutes; the rest of the time is spent at reading by this draft, and the whole half hour by those that prepare no home lessons. The teacher, after first glancing at the senior division to see that all are earnestly engaged, and that the monitor is doing his duty, and after giving directions to the two monitors of his own division as to the particular manner in which they are to exercise the children (for which see method of teaching the “First Book”), begins to teach in the draft he has chosen for himself. Whether he remain altogether with one draft, or divide his time between two, must depend entirely on his own judgment on each particular occasion. None of the drafts should be allowed to remain for one moment idle during the whole half hour. The teacher will take care to teach the different drafts in succession from day to day, so that at the end of the week each shall have received a just proportion of his time.

11 to 11½. *Senior division, reading lesson in drafts.*—The teacher is in charge on three days of the week, and the paid monitor on two; for directions, see 1½ to 2.

*Junior division, mental arithmetic and tables.*—The teacher in charge two days, and the paid monitor three. The children are sitting either in galleries, or, if there

are none, arranged in desks, as directed in page 30; or one-half in gallery, if there be only one, and the other half in desks. In any case they should be divided into two parts (or more in case of a large school), the teacher or paid monitor, whichever is in charge, taking one part, and an unpaid monitor the other; and he may either divide his time equally between them each day, or take each for an entire lesson on alternate days. For methods of exercising the children, see Part II., Chap. IV. If there be no paid monitor, this division must be taught by two unpaid monitors, on the days the teacher is with the senior division.

11½ to 12. *Senior division, writing.*—The teacher is in charge on three days, and the monitor on two. For directions, see Part II., Chap. III.; see also Part I., Chap. V., Sect. 5.

*Junior division, reading lesson.*—Teacher in charge, two days; paid monitor, three. The assistance of at least two unpaid monitors will be required. The directions given at 10½ to 11, apply here.

12 to 12½. *Play.*—The only remark necessary here is, that the children should never be allowed to play by themselves; the teacher should always be either with or near them. See Part I., Chap. V.

12½ to 1. *Senior division, arithmetic in drafts.*—One of the most important lessons of the day, and always managed by the teacher. The pupils work exercises on slates, dictated by the teacher or monitor, who explains methods, and corrects errors in principle, by means of the black board. Before commencing slate work, a few minutes should be devoted every day to arithmetical tables and mental calculation. Sometimes two drafts can be joined into one, to receive the same instruction, but this will depend on the particular portion of the subject. The teacher should generally be able to teach two drafts at the same time, and for this purpose they should stand together at a large circle, to prevent the trouble and delay of going from draft to draft. By standing at the same circle, the two drafts need not

necessarily receive the same instruction; different exercises may be dictated to them, and at the same time the teacher can easily manage both. To manage the whole division (three drafts), he must have the assistance of a good unpaid monitor, who will dictate from the book the exercises pointed out by the teacher, see if the answers are brought out correctly, and when necessary explain the method on the black board. The paid monitor might be with the teacher in this division on two days of the week, in which case no unpaid monitor would be required; on the other three days he should be with the junior division. (For full instructions, see method of teaching arithmetic.)

*Junior division, geography in gallery, or arranged in desks, as directed in page 30.*—Geography is a subject that may be taught to large numbers together, especially in case of young children. At this lesson, therefore, the junior division may be thrown into large groups; and in the present school they may all be taught together from one map, provided they can be accommodated in a gallery, or placed conveniently in the desks. The paid monitor has charge of this division on three days of the week, and will require no assistance if all are taught together; on the two days that he is with the senior division, the lesson must be taught by an unpaid monitor.

*1 to 1½. Senior division, dictation four days, geography in galleries or desks, one day.*—For geography, see 2 to 2½, and for dictation, see Part II., Chap. III. The teacher is in charge of the division on two of the dictation days, and the paid monitor on the other three days of the week; no unpaid monitor will be required.

*Junior division, arithmetic in drafts.*—At this lesson the division may generally be thrown into large drafts, each consisting of two small ones. The assistance of at least one unpaid monitor will be required. For directions, see Part II., Chap. IV.

*1½ to 2. Senior division, reading in drafts.*—This lesson is conducted every day except one by the teacher,

who will require the assistance of two unpaid monitors; the paid monitor might occasionally assist him during a part of the time, by sending a careful boy to take his place over the junior division. The teacher will take care that, from day to day, no draft shall be unjustly favoured at the expense of the others. The chief business of the unpaid monitors in this division will be to teach reading and spelling, but they should also learn to question on the subject, which, after a little practice, they will do very well by endeavouring to imitate the teacher.

*Junior division, writing in desks.*—The children, under the superintendence of the paid monitor, are writing copies on slates, except, perhaps, some or all of the second class, who may be writing on paper. All should be at work, to the very youngest. Those that have slates may either copy from one large common line chalked on a black board, which is hung on an easel in front of them, or each child may have a copy-line placed before him. The monitor's chief business is to see that all are supplied with pens or *long* pencils, and that they hold them rightly, and sit in a proper position.

2 to 2½. *Senior division, grammar three days, geography two days.* The teacher has the entire charge except on one of the grammar days, and the pupils sit either in galleries, or in desks, as directed at page 30. They must be divided into two groups, as the three drafts are too unequal to learn either subject profitably together. It will be better to join the third class and the sequel together (for both grammar and geography), placing the first draft of second by themselves. The teacher will want the assistance of an unpaid monitor, as the paid monitor's presence will be required with the junior division. On the days for grammar, the third and sequel classes should spend the whole half hour at that subject, but the first of second might read for a part of the time. On the geography days, two maps will be required, and no time must be lost in taking them down and hanging them before the classes. At

this lesson, as at all others, the teacher must take care not to allow any one group to monopolize an unreasonable portion of his time.

*Junior division, reading.*—The paid monitor who is in charge (except on one day, when the teacher is with this division), will require the assistance of two unpaid monitors; if there be no paid monitor, the lesson must be conducted altogether by unpaid monitors. The observations made in connexion with the lesson at 10½ to 11, apply generally here.

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## CHAPTER IV.

### MONITORS.

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#### 1. HISTORY; CHOICE; NUMBER.

THE monitorial system was first introduced into these countries, in the beginning of the present century, by Bell and Lancaster; it was taken up and supported for a time with great enthusiasm, and soon found its way into some of the principal countries of the Continent. For many years after its introduction the real extent of its utility appears to have been misunderstood; its advantages were ridiculously exaggerated by enthusiastic supporters; it was carried to an almost incredible extreme, and in many cases it was grossly abused. The monitors were chosen at random; they were not sufficiently prepared for their duties; they were obliged to teach constantly, and received very little instruction themselves; and worst of all, while thus unfitted for their monitorial duties, almost the whole of the teaching was deputed into their hands. The master scarcely ever taught, he merely *superintended*; and it was maintained that by this new engine, a single teacher could conduct a school of 1000 pupils, as easily as one of 20 or 30. The system worked out in this manner, as might

be anticipated, proved an utter failure wherever it was tried; the extravagant promises of its supporters were never realized, and it fell after a while into almost universal disrepute. In these and other countries, however, the employment of monitors was acknowledged to be useful—not the less so because it had been abused; and at the present day every judicious teacher, while carefully avoiding the absurd extremes of the old monitorial system, makes use, to a moderate extent, of the best of his pupils to assist him in teaching.

To carry out any of the preceding time-tables, and to keep all the children constantly at work, it is necessary to employ a class of trained unpaid monitors; some plain practical instructions on the general management of such a class, and on the best method of fitting them for their duties, shall form the subject of the present chapter.

Let the teacher never forget that on his own individual teaching, and on that of his assistants, if he have any, the success of the school mainly depends, *and that he employs monitors to assist, not in any degree to supersede, his own labours.* He employs them for the purpose of keeping children constantly working, who would otherwise be obliged to sit more than half the day idle. But he must himself teach on as uninterruptedly as if he had no monitors at all; he abuses the system if he allows the amount of his own teaching to be in any material degree lessened by their employment.

Generally speaking, they should be chosen from the highest classes in the school, that is, from the third, fourth, and fifth, or, if there be no fourth and fifth, from the third and sequel; boys are frequently found in the sequel class who make excellent monitors. None should be selected but those that attend regularly; for in the first place, irregular attenders are generally careless, not only as to the manner in which they teach, but also as to their own progress; and in the second place, when a monitor is unexpectedly absent, there is always more *or less* trouble and annoyance when his class comes to

be taught. The number of pupils forming this class will vary according to the school; in a small school of 40, there might be ten or twelve, while a school of 100 will require from 15 to 20. No monitor should teach more than two lessons per day, and the class should receive extra instruction from the teacher in compensation for the time they lose. It is here taken for granted that the advanced pupils are willing to teach one or two lessons each every day; there is no school where the master has earned the respect and confidence of the parents and pupils, in which the boys will not cheerfully assist him to any reasonable extent.

## 2. MODE OF EMPLOYMENT.

It will be better that each monitor teach at the same time, and as far as possible the same class, every day for a week. The teacher will always know how many monitors will be required at each lesson; and on Monday morning a list of those who are to teach during the different hours of each day for the week should be made out and announced. In this manner all random calls and haphazard employment will be avoided; and as each monitor knows his time beforehand, he will be generally at his post without being called. The following form will answer very well; the list for each week should occupy the page of a copy-book, and the whole book should be preserved for future reference. This list refers to time-table No. 1, and is suited for the small school referred to in the instructions commencing page 56. Supposing that there is a paid monitor, about fourteen different lessons will have to be taught by unpaid monitors in the course of the day; this is done in the present instance by eight boys, each of whom, except two, teaches twice. The order should be changed every Monday morning, that the monitors may not lose the same lessons for more than a week.

In assigning monitors for particular classes, care must be taken to select those best fitted for the different



MONITORS FOR WEEK ENDING 28TH MARCH, 1863.			
TIME.	NAMES.	TIME.	NAMES.
10-10½	—	12½-1	Patrick Cremin.
10½-11	Charles Young. Matthew Costello.	1-1½	Robert Delmege.
11-11½	Patrick Cremin. John Dolan. Daniel Ryan.	1½-2	James M'Grath. Michael Lynch.
11½-12	James M'Grath. Michael Lynch.	2-2½	Charles Young. Matthew Costello. Robert Delmege.

posts. One boy may be a good teacher of arithmetic, another of reading, a third may have a special taste for teaching geography, and so on; the teacher's personal knowledge of his monitors, with a little experience and practice, will soon enable him always to place the right monitor in the right place. In this respect, much might be left to their own choice, subject, of course, in every case to the teacher's approval. Although none but regular attenders should be placed on the class, still with the utmost precaution one or two will be occasionally absent; in this case, the only possible remedy is to select some other boy in the morning to teach the absent monitor's lessons for that day.

### 3. PREPARATION FOR MONITORIAL DUTIES.

From what has been already said, it will be perceived that while the teacher must depend on himself and his paid assistants for the chief and most important part of the teaching, still a considerable share must necessarily be deputed into the hands of monitors. It is therefore a matter of much importance that they be not only *willing and faithful* in the discharge of their duties, but

also moderately skilful in teaching. It is unfortunately not unusual to find schools in which the teachers show very little concern about the manner in which their monitors teach; they are called upon at random, placed in their classes, and left entirely to themselves. The teaching of such monitors is uniformly careless, slovenly, and worthless; they lose their own time, while those they teach receive more injury than benefit from their instructions. Teaching is an art that boys cannot be expected to acquire intuitively; to enable them to discharge the duties intrusted to them, they must receive some instructions on the methods of teaching the different subjects. These instructions must be extremely simple, short, and practical, and they will occupy only a very small fraction of the teacher's time. An occasional hint during the day, while making the usual hasty inspection of the classes, a word or two of encouragement, the correction of a fault, a few directions to the less experienced—this continued perseveringly from day to day, will render them both careful and skilful in teaching.

But besides this, half an hour of the time for extra instruction should be set apart once or twice a week, for the purpose of giving collective instruction to the whole class. Monitors are particularly liable to fall into certain vicious methods of teaching; to guard against these, and to notice faults already committed, will form a principal portion of these instructions. The more common faults in teaching the different subjects are noticed under the proper headings in this book, and to these the teacher is referred for further information. His own experience, however, if he be only commonly observant and watchful, will afford the most valuable materials.

In every school where there is an average number of first-class children, the teacher, while bestowing as much of his own time on them as is consistent with his duty to the rest of the school, will still be very frequently obliged to intrust them to the care of monitors. In the discharge of this part of their duties, more than in that

of any other, they are liable to fall into mischievous faults. For these reasons it is of great importance that they be well able to teach the First Book. It is a matter of no difficulty whatever; the youngest monitor can understand it. Make them perfectly acquainted with the four kinds of exercises mentioned in Chap. II., Part II. (method of teaching First Book), and at each particular lesson let them be directed which to use, always specially guarding them against the most prevalent faults in each.

Besides methods of teaching, there are some other matters on which the teacher will find it necessary to give them some directions; these relate to order and discipline, and should by no means be neglected. The following hints will be found useful and generally applicable, not only to monitors, but to teachers.

The order of the draft to be preserved; the pupils not to be allowed to talk to one another; as a general rule, he is the best monitor who keeps his draft most orderly. Both monitor and pupils to speak, so that the whole draft may hear, and no louder.

The pupils to stand with their toes to the line in front of the circle, not more to one side than to the other; they are to stand together, leaving no gaps; no boy to lean on his neighbour's shoulder; the first boy and the last are generally inclined to lean against the wall—this is to be prevented. No boy to leave his draft without liberty.

Except when pointing to a tablet or black board, the monitor to stand in the centre, with his back to the wall; he must address the children from that point; and in speaking to a pupil at the top or bottom of the class, he is to turn his head, not his body; generally, he should not move his feet. Let the monitor particularly avoid the pernicious practice of teaching the pupils individually, going from one to one, and speaking to each in a low voice.

A monitor must not by any means strike or

push the children, or in any other way use them roughly; if an ill-conducted boy continue to disturb the draft, after the monitor has remonstrated with him, let him be sent up to the teacher. He must avoid arguments or disputes with the pupils; any cause of dispute, if not immediately settled, to be reported to the teacher.

The monitor is not to allow prompting or copying, and he must not prompt the children himself. He is to have no dealings with them about marbles, tops, &c.; no communication of any kind except on the lesson.

These are a few examples of the kind of instruction necessary for a monitor's class; they should be constantly repeated—always kept before their minds. It is only by this means that the teacher can succeed in having his directions properly attended to. The occasional faults he may observe in the conduct, manner, and method of his monitors from day to day, will afford far the best materials for a few words of instruction to the general class. He should, besides, give them as many opportunities as possible of listening to his own teaching, reminding them that they ought to imitate him as nearly as they can.

Whether the monitors do their work well or ill, depends entirely on the teacher. If he appear indifferent, merely sending them to their classes, and giving himself no further concern, their teaching is sure to be of a worthless character. If, on the contrary, he show himself anxious, continue to remind them day after day of what they ought to do, and never fail to notice and correct a fault, they will certainly teach well. And let it be specially borne in mind, that all this can be accomplished without sacrificing the time of either the teacher or the monitors.

#### 4. EXTRA INSTRUCTION.

We have seldom known a highly successful school in which it was not customary for the teacher to give a lesson in arithmetic, or on some of the advanced branches, to his head class, after the dismissal of the other pupils. The duties of a teacher are so multifarious during the day, he has so many classes to attend to, that it is impossible for him, without neglecting the rest of the school, to bestow so much time and such exclusive attention on the boys of the head class as they require. But this can be remedied by one hour's instruction in the evening, when the school is quiet, and the teacher's whole attention can be concentrated on the class. This course should be adopted, even independently of the consideration that they act as monitors; but when these same boys lose one or two half hours every day in teaching, it becomes in a still higher degree a matter of obligation on the teacher. The old maxim that a person learns by teaching others, requires considerable limitation; in many cases, indeed, it holds good, but not unfrequently a monitor all but loses his time by teaching.

During seven months of the year, viz., from the 1st of March to the 30th of September, the monitors should receive extra instruction for one hour; and during the rest of the year for half an hour. In some few schools the hour's instruction may be divided, giving half in the morning and half in the evening; but in general the attempt to establish a morning class utterly fails, from the difficulty of getting pupils to attend so early. And even when it is carried on, it seldom produces much good—all the boys of the class are hardly ever present from the beginning, and the late comers, as they drop in, cause perpetual interruption. In general, therefore, it will be better to have the extra instruction carried on wholly in the evening. The whole of the pupils belonging to the monitor's class should remain for this lesson,

whether they have been employed or not in teaching that particular day or week.

About two half hours per week should, as already remarked, be devoted to the instruction of the monitors in methods of teaching; all the rest of the time should be given to literary branches. The particular subjects to be taught will depend on a variety of circumstances; but the time should be chiefly occupied with those that are in themselves most practically useful, and most popular among the pupils—such as arithmetic or extra branches.

The teacher should endeavour by every means in his power to render this class popular, to make it a post of honour among the pupils, an object of ambition to be selected. When a boy is placed in the class, the appointment should have an air of importance, and the name should be publicly announced. On the other hand, in case a boy who is already a monitor is guilty of any gross violation of the school rules, or any other misconduct, the teacher should not hesitate to degrade him from his position, and strike his name off the monitor's roll. The success of all this depends entirely on the tact, standing, and earnestness of the teacher. There are schools in which the advanced pupils are universally anxious to be placed in the class; and, on the contrary, others in which the nomination as monitor is regarded as a misfortune, since it involves an additional hour's application to business. And this diversity is not caused by any difference of character and habits in the pupils—it is entirely the result of the difference of zeal among the teachers.

## CHAPTER V.

## DISCIPLINE; ORDER; CLEANLINESS.

## 1. NOISE AND SILENCE.

A SCHOOL that is very noisy is not well conducted; there cannot be real effective work, without at least moderate quietness. Noise is a habit both with the teacher and the pupils, but it originates with the former; if the pupils make unnecessary noise, it is because the teacher sets the example, and because he has given himself the habit of listening, without concern or uneasiness, to noise made by others. In many very badly governed schools, the teacher lives in the midst of everlasting noise, that drowns all business, and distracts all attention. He never knows the luxury of a silent moment, except perhaps occasionally when the din rises to an intolerable pitch, when he suddenly either shouts out "silence!" or deals the desk a deafening blow of a pointer. This is sure to be effectual; there is an instantaneous lull, which lasts perhaps for half a minute. The noise soon begins, and gradually rises to its former intensity, to be again repressed by a similar process. All this, which from habit is regarded by the teacher and pupils as very natural, appears to a visiter unaccustomed to it not only injudicious, but excessively ludicrous. The case is still worse if the school be small: what can be more ridiculous than to hear a teacher talking, and the children answering at the top of their voices, in a room not much larger than an apartment in an ordinary dwelling-house!

If noise be established in a school, it requires some vigilance and determination to eradicate it: but this is the beginning of reformation—a necessary condition of all future improvement. Let the teacher begin with himself; let him avoid all loud talking when teaching,

and divest himself of the habit of addressing instructions to boys at the far end of the room. All boisterous conversation should be strictly prohibited. Above all, suppress that odious custom of shouting out complaints to the teacher; the prevalence of this practice is an infallible sign of wretched government. If a boy wish to complain of another, let him hold up his hand till he catches the attention of the teacher, or let him make the complaint to the nearest monitor; but let him not call the teacher, or shout the offender's name.

The monitors must be trained to speak, when teaching, in a moderate voice, and to see that their pupils answer in like manner. Nothing is more common in schools than the reverse of this—the monitors shouting their questions, and the children reading or answering with voices strained to an unnatural loudness. All the business of teaching and answering should be carried on, as nearly as possible, in the common natural conversational voice. If the school be very noisy, the teacher will do well to spend a few days training the children to observe this most important rule, till all have been habituated to it; after this a moderate degree of vigilance will be sufficient to preserve quietness. The following remarks from Dr. Sullivan's "Outlines" apply to every national school where monitors assist in teaching:—"To lessen noise as much as possible, the teachers are recommended to instruct and *accustom* the monitors to address their classes in a low, but strong and distinct tone of voice. *It is only the children forming their classes that require to hear them.* They should never, therefore, pitch their voices beyond their own circles, which are seldom more than five or six feet in diameter. When a monitor speaks so as to be heard by the adjoining classes, he is not only noisy himself, but the cause of noise in others, for he obliges them to raise their voices higher than would otherwise be necessary. In a word, NOISE BEGETS NOISE. If one monitor be permitted to speak loud when addressing his class, all the others must necessarily raise their voices in proportion."



The desk lessons, namely, writing, dictation, copying figures, or working arithmetical exercises from books, &c., should be carried on in perfect silence; as a general rule it is not necessary that the pupils speak one word during these lessons. They may, however, be a fruitful source of noise, if the pupils be allowed, as they are in many schools, to indulge in unrestrained conversation.

The teacher ought to have some signal for silence which should be universally understood. A bell is very well adapted for this purpose, but it should not be rung continuously; a single stroke will be sufficient. In the Central Model School, the teacher, by a light tap of one hand on the palm of the other, produces immediate and absolute silence. The pupils should be trained to yield instant obedience to this signal; its effectiveness depends on the quickness with which it is followed by perfect silence. All business should be suspended, and silence preserved till the teacher has issued his instructions, and gives the word, "go on!" A signal of this kind, when the pupils are thoroughly subjected to its influence, is one of the most effective aids to the preservation of order and discipline in a school.

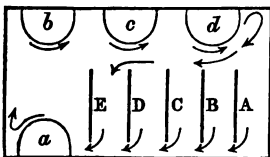
Let it not be forgotten, however, that a school may be *too* silent. When all the classes are working simultaneously, if the business be carried on vigorously, there must be some noise. It is here that the teacher shows his skill in preserving the proper medium—a moderate cheerful hum of business, equally removed, on the one hand, from the dull silence that damps the spirits of the children; and, on the other, from that disorderly, undistinguishable clatter of voices, that distracts the attention of both teachers and pupils, and renders real work an impossibility.

## 2. MOVEMENTS; MARCHING.

When a school is conducted in accordance with any of the systems already described, all the classes change

places at short intervals during the day. It becomes the teacher's duty to see that these movements be performed in a proper manner, otherwise they will prove a fruitful source of noise and confusion.

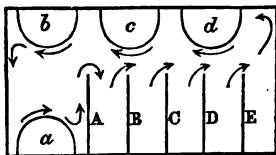
If there be walking passage all round the desks (as in figs. 1 and 2, page 23), the two divisions (bipartite system) can change places without any difficulty, if the following directions be carried out. The draft that stands at *d* will sit in the front desk, and the other drafts, *c*, *b*, *a*, will fill up the desks D, C, B, A, in succession. It depends on the teacher whether the highest draft of the division stand at *a* and the lowest at



*d*, or the reverse; in the former case, the high draft will sit towards the back desk A, and in the latter, in the front one E. But in whatever order the drafts of one division stand and sit, the drafts of the other division must stand and sit in the same order. The movements can be easily understood by the directions of the arrows. Both divisions move simultaneously. The children in desk E move first (following class *a*), till they arrive at *d*, where they fall into their places; they are followed in succession by those in desks D, C, B, A, the whole forming one continuous line. The pupils of the drafts should also, in marching, form one line. The desk E will be vacant by the time class *d* have arrived at it, and so with the other desks. It may and generally does happen that a draft will more than fill a desk, but this is of no consequence; the pupils should fall into and fill up the desks E, D, C, &c., in succession, without any formal separation of drafts, unless the teacher has some particular object in isolating them. The whole change, *from the cessation of one lesson to the commencement of the next*, should not occupy more than one minute, or a minute and a half.

If the ends of the desks be against the wall, a different

plan must be adopted. Here the order of the drafts when they sit in the desks must be reversed; those that stand at *a* sit in the front desk, and the other drafts occupy B, C, &c., in succession. In this case also both divisions should move simultaneously; those in



desk A move first, and proceed down along the ends of the desks towards the circle *d*, where they turn up and walk along the wall, passing the circles *c*, and *b*, till they arrive at *a*, where they take their places. They are followed by desks B, C, &c., the whole forming one line. At the same instant that those in desk A have begun to move, the children in the four drafts begin also to move simultaneously in the directions of the arrows. By the time draft *a* have arrived at the end of the desk A, this latter will be vacant, and so of the others; the draft pupils will fill up the desks in succession.

Whoever reads and understands the above instructions, will find no difficulty in changing the positions of the three divisions in the tripartite system. The movements in the quadripartite system are less simple, and require some ingenuity to prevent the different drafts from crossing and clashing with each other; but they cannot present any difficulty to a teacher of ordinary reflection and judgment.

In all, except perhaps the very smallest schools, the children should be taught to march. No extra time need be devoted to it; the ordinary school movements will afford a sufficient amount of practice. Marching drill in a school is merely a means towards an end; it ought to be practised so far as it tends to preserve order, or to facilitate the despatch of business, and no farther. To teach children to march, though not a very difficult task, yet requires some attention and perseverance. *Their step must be natural*; they must not be allowed

to raise the feet high, and strike them heavily on the floor. They should not touch, or push, or hold each other by the clothes; they should be obliged to maintain a proper position, standing straight, with hands either behind their backs or by their sides, and they must march in one continued regular line, leaving no gaps. In every one of these particulars they will go wrong, if the teacher be not on his guard.

### 3. CHANGE OF LESSONS; PLAY.

The termination of each lesson ought to be announced by some signal, such as the stroke of a bell, &c. One lesson should not encroach even a minute on the time of another; at the signal, therefore, all business should at once cease, and there should be perfect silence till the teacher issues his instructions. All necessary preparations for the change should be made at the order of the teacher, or of the person in charge. If those at the drafts have been using slates, they should be collected by the first boy in each draft at the order "Collect slates!" The copy-books, &c., should be collected in like manner, if a division have been at writing. If the pupils in the desks have slates, they all drop them together into the apertures, at the word "Slates in!" All those in desks will stand up together at the orders, "Right face!" (or "Left," as the case may be), "Hands on desks!" "Out!" When all is ready, the pupils of the different drafts and divisions begin at once to move towards their respective places, at the word "March!"

The pupils falling into drafts should do so quietly and regularly, taking their places at once, without rushing towards the circle, or pushing each other. And if they require slates, the monitor of each draft, or the head boy, should distribute them as noiselessly as possible. The pupils going to the desks remain standing opposite their seats till the word is given to sit down. And when they have sat down, they must not be permitted to snatch up books, slates, &c.; they

should keep their hands off the desks, and whatever they require for the next lesson they should take up all together, at the order of the person in charge. All these movements will require a number of well understood orders or signals, which every teacher can invent for himself. He should, however, avoid all unnecessary refinement, always bearing in mind that arrangements of this kind should be introduced only so far as they conduce to order and despatch.

The teacher will see that the next lesson be commenced without a moment's delay. There is always a strong tendency, on the part of both monitors and pupils, to idle away a few minutes at the beginning of a lesson; this is a very trifling matter if it occur only once or occasionally, but if repeated at the beginning of each lesson during the day, it becomes a serious item. By banishing this pernicious custom, the teacher effects a double good; not only does he gain a considerable amount of time, but, what is still more important, he trains his pupils to the valuable habit of turning every moment to some account.

In every school there ought to be half an hour's relaxation every day. Some few teachers are averse to this, and accordingly they toil on for five hours, or longer, without intermission. It is a mistake to imagine that this saves time; both teacher and pupils will get through more work by taking half an hour's relaxation. If there be no playground, they should play on the road, but in this case limits should be assigned, beyond which they should not be allowed to go. If for any reason they cannot be sent out, then there should be simply a cessation from business for half an hour, during which the pupils can take lunch, or amuse themselves, without being allowed to make too much noise. At no time during the day are children so much inclined to rudeness and noise, as when they are coming in from play; and the teacher, therefore, will find it necessary at this time to be specially on his guard. They should not by any means be allowed to rush promis-

cuously to their places in the school, according as they arrive at the door. Five minutes before the termination of play-time, the bell should be rung, and the pupils collected in the play-ground, in ranks according to their classes. They then march in order into the schoolroom to their respective places, and this movement should be performed with as much quietness and regularity as any of the ordinary movements during the day. The pupils should be *all* at their places, and actually beginning to work, at the time mentioned in the time-table for the commencement of the lesson following play.

#### 4. CAPS, CLOAKS, SATCHELS, ETC.

A school-room in which the pupils are allowed to place their caps wherever they please, will always look unsightly and slovenly. Caps are seen in all possible places—on the forms, under the desks, in heaps on the window seats, and hanging from stray nails here and there on the walls. This may be avoided by the adoption of some simple plan for disposing of them. One of the most obvious is a cap-rack, the construction and position of which are described in page 10. According as the pupils come in, they hang up their caps, the lower crooks being appropriated to the little ones. Once hung up, they should not be removed till play time; the pupils are then marched past in single file, and each as he passes picks up his own. The teacher or monitor should stand by the rack at this time to prevent irregularity. A boy who does not see his cap at once, should not block up the way by staying to look for it; he should pass on, and come round again. Returning from play, they hang them up again, and at dismissal are marched past as before.

In a large school, the best way perhaps to manage caps is to let each boy keep his own, suspended round his neck by a string, or in any other manner he may find most convenient. This is the plan adopted in the

Central Model School, and there is never the slightest trouble or confusion.

In a female school it will be better to place some sensible girl in charge of the rack, to take the cloaks from the girls as they arrive, and to arrange them. If they be permitted to do this for themselves, the cloaks will always be thrown here and there in an untidy manner, and will take up much more space than is necessary.

Every boy should be provided with a satchel, which should always be suspended from his shoulder, and in which he should keep all the books required in daily use, so as to have them constantly ready at hand. At the change of lessons no boy should be allowed to leave his place for an instant to look for books or for anything else. In the absence of a leather satchel, a small bag, made of calico or green baize, with a long running-string, by which it is kept suspended from the neck, will answer very well. Many boys prefer a strap, with a buckle, which also answers the purpose, though not so well, as it is troublesome, and besides, injures the books. In a female school, each girl should have a neat bag or a little basket, which she should always keep in her hand or suspended from her arm.

Some may perhaps consider the inculcation of such simple matters unnecessary, as being sufficiently obvious to every teacher; but whoever is practically acquainted with the working of the generality of ordinary schools, will think otherwise. It is in fact precisely the neglect of such apparently trifling matters, that chiefly constitutes the worthlessness of many of the worst kinds of schools; and this subject of satchels affords a good illustration. How often will you see a school thrown all at once into a state of utter confusion by the announcement of a change of lessons! Because the pupils, instead of being obliged to keep their books always by them, are allowed, on their arrival in the morning, to deposit them here and there through the school. The announcement is, therefore, followed by an immediate and universal *search*, and, after much confusion, noise, and jostling,

the school, in eight or ten minutes, settles down in its new phase.

#### 5. SLATES; PENCILS; COPY-BOOKS, ETC.

There may yet, perhaps, be found some few schools in which every boy has his own slate, which he either keeps suspended from his neck, or leaves in some part of the school till he wants to use it. Such schools are never half provided with slates, and the few that are available are of different kinds and sizes, and half of them broken; there is, besides, always more or less disorder at the commencement of a slate lesson.

A good supply of slates in a school is absolutely essential. They should not be the private property of the pupils, but should be supplied from some school fund, or by the manager, teacher, or pupils, and they should always remain in the school-room; they are so cheap as to be within reach of the poorest school. There should be at least as many slates as pupils, since there are periods during the day when all may be using them; and the supply, if necessary, might be kept up by obliging any pupil who breaks one to pay for it. The best of the slates should be left in the desks (which should of course be furnished with apertures), *and these should never be removed*; they should remain in the desks, so as to be always under the hands of the pupils when they require them at the desk lessons. A dozen slates should be set apart for each draft circle; they should be kept in some place at or near the circle, *and never removed, except for the use of the proper draft*.

As in case of slates, so also with pencils; a full supply should always be left in the desks (which are supposed to be furnished with grooves to hold them) for the use of those at slate lessons. One of the causes of bad penmanship is the practice of writing on slates with short bits of pencils. The teacher will therefore take care that the desk pencils be long, and that they be kept constantly pointed. They should never be removed



from the desks; at the end of the lesson, the pupils, at the word, "Pencils down!" should deposit them in the grooves. For the floor exercises, the pupils might use their own pencils, which may be either long or short. If the desks be not furnished with grooves, the pencils might be kept in a little box, which should be in charge of the monitor, or of some careful boy. At the beginning and end of each desk exercise, they should be distributed and collected by the first boys in the desks, who are supplied by the boy in charge of the box. In the Central Model School every pupil is obliged to keep his own pencil, though it is in many cases difficult to make them keep long ones. The plan, however, answers very well on the whole, and might be adopted in any school, if the teacher thought it better than the other.

Not more than half an hour should be allowed for the writing lesson; if there be well-planned arrangements for distributing and collecting the copy-books, not more than two or three minutes will be lost, so that the pupils will be actually engaged in writing for at least twenty-seven minutes. The copy-books should be taken up every day and placed in the press; the pupils should in no case be allowed to keep them with their other books. On the cover of each should be written, in a large legible hand, the owner's name, and the draft to which he belongs. The copy-books belonging to the different drafts should be placed in separate compartments of the press, and should be carefully kept from mingling with each other. The best plan is to keep those of each draft tied between two boards; this effectually separates them, preserves the books in proper shape, and prevents the corners from turning up. If quill pens be used, they should be all made in the evening or morning for the coming day, and distributed at the time of writing. In like manner the copy-books should be previously prepared. If the pupils write from pieces, one should be placed in each book; or if the teacher write head-lines, they should all be written *beforehand, and outside the school hours.*

When the time for writing has arrived, and after the divisions have changed places, and the writers have taken their seats, the monitor places the books belonging to each draft in the hands of the first boy, who, without calling names, and as silently and quickly as possible, places each before the owner. The books belonging to the absent boys should be taken back immediately to the press, and replaced in the proper compartments, or between the boards. While the head boys are distributing the books, the pupils should keep their hands off the desks; no one should be allowed to take up his copy-book till the orders are given, "Open books!"—"Begin!" when they all commence to write together. If the discipline be good, all these preliminaries will not occupy more than one or two minutes. At the end of the lesson, when "Time up!" is announced, each boy wipes his pen dry and closes his copy-book, after placing the piece in it, if pieces are used. The same boys that distributed, now collect the books, and the monitor brings all to the press, placing those belonging to the different drafts in the proper compartments.

## 6. SCHOOL-ROOM; DEMEANOUR OF CHILDREN.

The teacher should be most careful as to the cleanliness and general appearance of the school-room; it should be swept every evening after school, and the furniture, &c., dusted in the morning. The means for doing this depends, of course, on the particular school, but in the greatest number the pupils themselves should do it, taking the task in turn on successive evenings.

During the day the room should present a neat and orderly appearance; no books, slates, or caps should be seen scattered here and there, or thrown in heaps on the desks or window seats. If the rules already laid down for the management of caps, satchels, slates, and copy-books, be strictly carried out, this can scarcely occur. The walls should not be neglected. The pic-

tures, tablets, Commissioners' Rules, &c., should not be hung, as is often the case, on stray nails driven in all possible directions; they should be suspended in rows, and at regular distances on tablet-rails, and they should, as far as possible, be classified both as to size and subject.

The manner of hanging the maps will also require some consideration. In many schools pulleys are used; they are very convenient, as the maps can be taken down without delay, when required for use. If pulleys cannot be had, a much simpler and equally convenient contrivance may be adopted. A piece of whipcord is attached by its ends to the two rings of each map, by means of which it can be suspended from a strong nail driven into the wall at the proper height. A pole of sufficient length, with a little fork or simply a deep notch in the end of it, will answer quite well for taking them down and hanging them up. A map should never be hung by driving two nails through its two rings into the wall; this renders it practically immoveable. Whatever mode of suspension is adopted, one thing should be always kept in view, that every map should be capable of being taken down and put up again without the slightest difficulty or delay. The cords should, therefore, be all tied in what are called *running knots*. The large maps should be hung pretty high, so as to be over the tablets and smaller pictures, and they should be left open during the day. When a map is required for special use, it is of course taken down and placed before the class; after the lesson it should be immediately restored to its original position.

There are certain disagreeable habits contracted by many children, which, though they do not deserve the name of bad conduct, may yet be very offensive, and injurious to the discipline or cleanliness of the school. Such for instance is the custom of eating bread during the time of lessons; play hour is the proper time for lunch. So also the very disagreeable habit of yawning, which *always* indicates either weariness or laziness; a boy

may be obliged to yawn, but he should hide it. A pupil should not be allowed to keep his hands in his pockets, to stand in a lazy or lolling posture, to lean on the shoulder of his neighbour, or to rest his shoulder against the wall, while standing at his lessons.

## 7. ATTENDANCE.

The irregularity of the children's attendance is an almost universal source of complaint with teachers. In this respect they are very frequently but too well justified, as the parents often keep their children at home on the most trivial occasions. In any individual case, however, it is unquestionable that the degree of regularity greatly depends on the character of the teacher and of the school. Excessive irregularity is frequently assigned as the *cause* of the low state of a school, but it is much oftener the effect; for both the parents and children naturally become indifferent where the discipline and instruction are of a worthless character. On the other hand, a good, cheerful, popular school exerts a kind of attractive influence over the children; they are less apt to be kept at home, because they are themselves anxious for school, and they attend not only in greater numbers, but also with increased regularity. While all ordinary schools, then, must, to a greater or less extent, submit to the evil of irregular attendance, each individual teacher may undoubtedly, so far as his own school is concerned, do much to remedy it; in the first place by earnest, well-directed, and persevering exertions in the school-room, and in the second place, by constantly communicating and reasoning with the parents.

Another most fruitful source of annoyance, especially in rural schools, is the want of punctuality of the pupils in their morning attendance. While suppose 10 o'clock is marked on the time-table for the commencement of the first lesson, it is quite usual to see the pupils dropping in singly and in groups till after eleven; and they

may be observed on the roads, loitering along towards the school quite unconcerned, though it is already long after ten o'clock.

Among the many circumstances that may be considered indicative of a badly conducted school, this, when allowed to run to an extreme, is perhaps the most infallible of any. The unpunctuality of the children is almost always the consequence of indifference or want of firmness, and vigilance on the part of the teacher. Children, if left to themselves, will never be punctual no matter how late the hour for commencing business. If they are not made to understand practically the evil of late attendance—if they are allowed to walk into the school and take their places at all hours, while the teacher shows no concern and makes no inquiry—the natural and inevitable consequence will be, utter indifference and hopeless irregularity. To ensure punctuality, the teacher must himself set the example in his own person, and besides he must be unceasingly vigilant; every boy who comes late should be called to account, and obliged to explain the cause. Perhaps the most effectual remedy of any is confining the late comers, from thirty minutes to an hour in the evening after school; this, when combined with the constant remonstrances of the teacher, never fails to ensure punctuality. But as it is the certainty of punishment that chiefly gives it its preventive effect, the rule, if once adopted, must be invariably enforced, whether the late children be few or many. Many teachers adopt a line of action that encourages the pupils in the practice of late attendance. They hold over the commencement of the school business beyond the proper time, waiting for late comers, thus not only violating the time-table, but positively placing a premium on unpunctuality. The business should begin exactly at the hour stated on the time-table, no matter how small the number actually present, and those who arrive afterwards should be at the loss of the lessons they have missed.

## PART II.

### METHODS OF TEACHING.

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#### CHAPTER I.

##### GENERAL OBSERVATIONS ON METHOD.

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##### 1. ANALYSIS AND SYNTHESIS.

As the words analysis and synthesis are frequently used in works on education, it is right to explain their meaning. Analysis literally means taking asunder, resolving anything into its elements. Synthesis is the reverse; it means putting together—the formation of anything by uniting its elements. In ordinary language the words bear several shades of meaning, and in their application to the subject of education, their acceptation also varies. A teacher uses the analytic method, when in giving a lesson on any object, he follows the direction of its actual material analysis. Here, for instance, is the outline of an analytic lesson on a coat. “Coat, made from pieces of cloth, cut and sewed by the tailor; cloth, formed of threads crossing each other; weaving, napping, fulling; threads, formed of wool-fibres, twisted; spinning, dyeing, carding; wool from sheep; shearing, washing.” A synthetic lesson would commence at the fleece, and proceed in the opposite direction.

The word analysis is used to denote the process of reasoning from effects to causes; that is, of investigating the causes of existing facts or phenomena. And it is

also commonly employed to designate the process of active observation and examination, by which every human being becomes acquainted with the qualities of the various bodies by which he is surrounded. When a teacher in his instructions follows the natural direction of investigation, and leads the children through the actual process of discovery; when he directs and assists them in searching out the reasons of facts, or the causes of existing phenomena, or leads them to examine the qualities of bodies, and to deduce the natural inferences; in these cases also he uses the analytic method. Take, as an example, a lesson on a common bellows. If he commence with the current of air from the pipe, examine whence it comes, and its cause, how it gets in, the use of the valve or "clapper," the cause of the rush of air inwards through the valve, when the upper board is raised, and infer the pressure of the external air; this is an analytic lesson. If the teacher proceed in the opposite direction, tell the children about the pressure of the air; show that this pressure forces a supply in through the valve when the board is raised; that the valve prevents its return, and that the pressure on the board forces a current through the pipe; this lesson is synthetic.

The synthetic method commences at simple facts, and proceeds on to others more complicated. The ordinary methods of teaching spelling, reading, writing, euclid, and the greater part of arithmetic, may be pointed out as examples of synthetic teaching. It is generally, for both master and pupils, the shortest and easiest way of teaching and learning; of communicating the knowledge that is acquired slowly and laboriously by analytic investigation. It is therefore the most useful; it is the method that must be employed in teaching the principal part of all the common school branches. The analytic method is much more difficult to manage, and this is one reason why it is so seldom used; any teacher can communicate knowledge synthetically with more or less *skill*, but no one who has not considerable experience

can use the analytic method effectively. When, however, it is skilfully managed, it affords the finest possible intellectual exercise for the pupils; and this is especially the case if the teacher be a good questioner—if he possess the art of leading them to reason out all the most valuable deductions for themselves.

It most commonly happens that neither method is used exclusively, but that both are combined, even in the same lesson; the teacher at one moment stating a number of facts synthetically, and at the next, leading the children by a few skilfully directed questions to infer analytically some important conclusion. This observation applies to almost all the common school branches; they are best taught by a combination of the two methods. A judicious teacher will know when and how to make use of each, according to the nature of particular portions of the subject, or the proficiency or peculiarities of the children.

## 2. INTERROGATIVE AND AFFIRMATIVE METHODS.

There are few teachers of the present day who would think of teaching a lesson exclusively by a lecture. It may perhaps be questioned whether a lecture is, under any circumstances, a very useful instrument for imparting information; but for children, it is certainly, when not accompanied and broken up by frequent questioning, all but worthless. Neither the method of interrogation, nor the method of lecture, can be used exclusively; good teaching consists in a judicious combination of both. A teacher will find it constantly necessary to state facts to the children, but he should immediately after, or during the course of the lesson, question them on these very statements; the fact-statements without the subsequent interrogation generally go for nothing, and the longer they are, the more certain of being immediately forgotten. It is vain to attempt to throw blame on children who are found ignorant of certain subjects they ought to know, by asserting that they have been



often *told* all about it; if the teaching consisted in merely *telling*, even though the process is gone through sufficiently often, the blame assuredly does not rest with them. Children are naturally heedless, and prone to forget what they are told; unless their minds are actively at work following the teacher, either there remains no impression at all, or it is merely transitory. It is only by making them repeat the facts and reasonings in their own words, that the teacher can be certain they are thinking. The amount of knowledge they receive is measured, not by what he tells them, but rather by what he contrives to make them state to him in answer to his questions. Frequent interrogation and repetition, therefore, are the best and surest means of imprinting permanently on their memories the subject matter of the lesson.

There are several classes of questions used in teaching. Questions of examination, as the name implies, are employed, not for the purpose of giving instruction, but merely to ascertain what the children know. They may form a connected series, or may be mixed and scattered according to the taste of the examiner. In the ordinary school routine, the teacher will frequently have to use questions of this kind:—in examining home lessons or “tasks,” in examining for promotion or classification, and often to test the children’s knowledge on some particular points, when teaching the common school lessons. But he must guard himself against the error of indulging to an unlimited extent in this species of questioning, a fault that frequently characterizes the instructions of inexperienced teachers.

Questions of instruction, or catechetical questions, form another very important class; they are often called “Socratic questions,” because Socrates usually employed them in his instructions and reasonings. They are chiefly intended to direct the thoughts of the children on the subject under consideration—to oblige them as it were to exert their reasoning powers, that they may, *as far as possible*, by their own reflection, infer those

very facts or conclusions the teacher wishes to communicate to them. The questions, therefore, generally ought to be such as they can answer; and whenever one occurs too difficult for them, the teacher should put it in an easier form, or if necessary lessen the difficulty by a few introductory questions. The questions will, in many cases, depend on, and be suggested by the children's answers; each answer serves as an index to show their progress in the reasoning, and the teacher determines the nature or graduates the difficulty of the next question accordingly. The whole series of questions and answers will be, therefore, to some extent, connected in regular logical order, often forming a train of reasoning somewhat like a proposition of euclid, beginning at simple obvious facts, and terminating in some remote and important conclusion.

It must not be supposed that the teacher will, in all cases, be able to draw forth by mere questions everything he wishes to teach. He will often be obliged to adopt the affirmative instead of the interrogative method, in other words, he will have to state the facts or draw the conclusions for the children himself. Mere matters of fact, when occurring for the first time, cannot, from their very nature, be taught by interrogation. In other cases the reasoning may be occasionally so difficult, as to render the process of working it out heavy and tedious, or perhaps impossible. In these and all such cases, the teacher will have to state affirmatively what he wishes to communicate; and thus the whole lesson will consist of a series of questions interspersed with explanations and affirmative statements, the relative proportions of each depending on the particular subject, and on the knowledge of it previously possessed by the pupils.

### 3. SIMULTANEOUS INSTRUCTION.

When a teacher gives instruction to a number of pupils together either standing in a draft before him, or sitting in a gallery, this is what is called simultaneous

or collective teaching. Some of the most common faults in connection with simultaneous or class teaching, shall now be noticed, and directions given for their correction.

It is necessary, in the first place, to guard the teacher against the practice of simultaneous answering, which is usually carried on in the following way:—The teacher puts his questions, not to any particular individuals, but to the whole class; all who are able may answer, and those who are not commonly chime in with the others, so that every question is instantly followed by a chorus of answers, which are apparently simultaneous and universal. To a person unskilled in the art of teaching, this appears a most attractive method of managing a class—it is fishing with a net—teaching all together, instead of one at a time, and then it is usually attended with great animation. And there are even many teachers who constantly practise it, either through mere negligence, or beguiled by plausible appearances into a conviction of its superiority. These pleasing features are, however, purely deceptive; for, with all its attractiveness, it invariably terminates in the most wretched results. There are always two or three pupils—seldom more—who are really thinking and answering; all the others are mere parrots, catching up and echoing their answers mechanically. This is done so quickly, that, to an unpractised ear, the answers appear perfectly simultaneous. Children, when learning, will not think if they can help it, and here is a ready way of avoiding it. Constantly accustomed to depend on others for their answers, they ultimately lose every vestige of self-reliance, and become incapable of the slightest independent mental exertion. This will be rendered sufficiently apparent by questioning them individually and apart. When deprived of their accustomed assistance, they are bewildered, and incapable of fixing their attention for a moment on the matter before them; they hesitate and blunder, and stammer out the most nonsensical, hasty, guessing answers.

Simultaneous answering, however, should not be entirely discarded; there are cases in which it is useful, but then it should be employed with great caution. It is indispensable in an infant school, where it is valuable as a mere disciplinal exercise; it helps, besides, to rouse the children, and to keep their attention fixed on the teacher. But even here it should never be used exclusively; it should be constantly tested and confirmed by individual questioning, the teacher calling on children from all parts of the class, more especially on those whom he observes to be inattentive. With the pupils of ordinary national schools, it should be used more sparingly, and only very seldom with the most advanced classes. As a mere mechanical stimulus to attention, it might be employed as often as the teacher thinks necessary; but he must never forget its worthlessness as an instrument of teaching, and the danger of indulging in it too extensively.

There are two ways of putting a question in class or gallery teaching. First, it may be given to some individual boy, whom the teacher names or points to; in this case the pupil answers if he can, and if he hesitate or answer wrong, every pupil who thinks he can answer correctly, should put out a hand, and the teacher chooses the next answerer from among them. Secondly, he may give the question to the class generally, without naming any particular boy; here no pupil should speak, but all who think themselves able to answer should, as before, hold out their hands, and the teacher names one after another till he gets the proper answer. The pupils should be well trained to this practice of putting out their hands; if not—if they must be told what to do on each particular occasion—the teacher will suffer much loss both of time and words, in giving directions. It is extremely disagreeable to hear a teacher constantly accompanying his questions with “Hands up!” or, worse still, “All who can tell, &c., will hold up their hands.”

When the teacher puts a question to a boy, no other should be allowed to answer, unless by the usual process of being called on after holding up a hand. This caution is not unnecessary; for the fault it is intended to check is a serious one, and very general. In some schools, you can scarcely put a question of any kind to a boy, without being instantly answered by another. The practice is very disorderly, and savours of ill manners, and as it is in other respects very injurious, the teacher should carefully suppress it.

The teacher will be careful not to confine his questions to the best boys. This is a most serious fault, and unfortunately by no means uncommon. It is not unusual to see a teacher with a class before him, directing nearly all his questions to a few boys at the head; on these he bestows his whole attention, and scarcely ever turns his eyes towards the others. These few favoured pupils monopolize the whole of the teaching, while the rest, neither hearing nor learning anything, fall into a kind of intellectual torpor; they have none of the teacher's sympathies, and they derive no benefit from his instructions. The teacher should most carefully avoid this most unjust and injurious practice. He should give all a due share of teaching; the dull or indolent boys should be questioned at least as frequently as the others. His eyes should wander round the class, and should not rest too often or too long on favourite pupils, and as a general rule, all the boys should constantly look into his face. He should pour his questions plentifully on those who, from any cause, do not frequently hold out their hands, which he can manage if necessary by naming them individually. Besides those boys who cannot answer, there are generally a few who can, but who, from indifference, indolence, or inattention, will not hold out their hands. The teacher will find no difficulty in detecting such boys, partly from the blank expression of their faces, and partly from his previous knowledge of them. The best and readiest remedy he

can adopt with boys of this kind, and one which generally proves effectual, is to ply them well with questions whenever he finds them inattentive.

When a question is intended for some individual pupil, the best plan generally is, without naming or looking at him, to first put the question; the teacher then looks round the class, and either points to, or names him. By this means the attention of all is kept alive, because each feels liable to be called on. Generally half or three-fourths of the pupils should put out hands for each question; if there be only a very few hands, the question is not sufficiently simple; and if this occur very frequently, the teacher may conclude that the subject, or his manner of treating it, is too difficult for the children, or that in some other respect his teaching is bad.

When a question has been answered correctly by one boy after being missed by several, the teacher should not rest content with this single successful answer and pass on to another question. There are few faults in school teaching more general among teachers than this, or more necessary to be corrected. When no responsibility is involved, the pupils, generally speaking, will not trouble themselves to listen very attentively to their neighbours, and so the right answer and the time expended in searching for it will probably be lost on the greater part of the class. But let them understand that all are liable to be called on to repeat the correct answer, and every boy will be listened to with attention. In all such cases, therefore, the teacher should return on those who have missed, and make them answer correctly, and should take occasion, during the lesson, to ask the same question at least once again, in order to fix it firmly on their memories.

The teacher should frame his questions in simple language, so as to be perfectly understood by all the pupils, and his enunciation should be so distinct that not a syllable may be lost. Notwithstanding all precautions as to clearness, however, there will be frequently one or more pupils who through inattention will not catch the

question at all, or will catch it incorrectly. Such pupils should always be regarded as missing, and besides should be called to account for their inattention; for children should be taught the art of listening, as well as those of speaking, writing, &c. The teacher will do well, therefore, to observe this rule: never, except for the purpose of simplifying his language, or for some other obvious and sufficient reason, to repeat a question a second time on the same occasion.

#### 4. MANNER OF ANSWERING.

The manner in which the pupils answer demands the teacher's most earnest attention. They should be habituated to give full answers. There are various ways in which an answer may fail in fullness, and various circumstances that may lead to such defects. The answer should generally include and commence with the subject; thus, "What is a continent?" answer, "A continent is a large tract of land, &c." "The chief towns of Meath?" answer, "Meath, chief towns, Trim, Navan, Kells." One of the most usual causes of imperfect answering is the difficulty of getting the children to speak so as to be heard and understood. In rural schools this is especially observable; there the children are often found so excessively bashful, that it is almost impossible to induce them to speak or even to look up; when questioned, they hang their heads, and mutter, in answer, a few unintelligible words. This ridiculous shyness of manner, with the inaudible voice and half answers that usually accompany it, result entirely from the want of proper school training. Great pains are taken to teach the art of reading; but there is another art equally necessary—the art of speaking—which is too often left entirely to chance, the teacher seldom bestowing any thought on it. And for this neglect the teacher himself not unfrequently suffers; for while the children may in other respects be very well taught, he has often the mortification to see *them* set down for total or partial ignorance, because

they either remain totally silent, or break down in their miserable attempts to answer. The part of an answer that is most commonly imperfect is the end; it will often be observed, that a boy commences very well, and goes half way through, but towards the end breaks down or drops his voice, or perhaps omits altogether just the last two or three words—in either case rendering his answer, or a part of it, unintelligible. The faults now noticed are very common, but they are not difficult to avoid, if the teacher only take moderate pains to train the children. Every boy should be obliged to answer so loudly that the teacher and every pupil in the class may hear him; he should not hold his hand or a book before his mouth, and he should look into the teacher's face; his answer should be fully finished, *and should be as loud and distinct at the end as at the beginning.* Whatever a boy has to say, whether it be right or wrong, he should express firmly and deliberately, with a clear voice and distinct utterance. When he fails in any of these respects, he should be obliged to repeat the answer over again, avoiding the faults of the first attempt.

An irascible or impatient temper in the teacher not unfrequently causes the children to break down in their answers. There are some teachers who cannot hear a wrong answer without coming down with merciless severity on the unfortunate culprit, or, worse still, exposing his ignorance with bitter derision. The pupils of such a teacher never express themselves openly or freely; they are always apprehensive of danger, and consequently timid and distrustful. This unamiable and pernicious habit is productive of no good whatever, but, on the contrary, exercises a most injurious influence. If a boy answer wrong, hear him patiently; do not abuse or ridicule him, but simply either show him his error or pass the question to another. He will then always have the courage to speak freely when he thinks he is right, without being haunted by the dread of humiliation, should he happen to make a blunder.



### 5. PROMPTING; SUGGESTING; GUESSING.

One of the most pernicious and deceptive practices connected with school teaching, is that of prompting in all its varieties. It is only a practised teacher that can understand how dexterously children learn to prompt; how slyly they manage to utter the first words of an answer without moving the head, and almost without stirring the lips; how quickly and almost instinctively the questioned pupils take up and use the hint, so as to deceive not only a visiter, but often even the teacher himself. This practice is odious in itself, because it is a kind of deception; the prompter, and he who answers by his aid, are both of them guilty of falsehood and dishonesty. It exercises most injurious effects on the school: it destroys the children's self-reliance, deceives the teacher, and counteracts the effectiveness of his instructions. There is another variety of prompting, chiefly practised during arithmetical exercises, namely, copying off each other's slates; and to this the same observations apply in full force. When the children are well trained in this kind of deception, it is quite possible that almost everyone in a class may show an exercise worked out correctly, although not more than three or four of the whole number are really able to go through it. And a visiter may look on the whole time, pleased with the general proficiency, without in the least suspecting anything wrong. Some teachers prevent this by placing the children, in pairs back to back; but this is not to be recommended, as it amounts to a confession that they are not to be depended on. These practices can easily be suppressed, if the teacher be sufficiently earnest and vigilant. Train the children to avoid them, because they are mean and dishonourable; watch diligently for an infringement of the rule, and never fail to notice it when detected. If these suggestions be followed, prompting and copying, with all their vicious consequences, will soon disappear from the school.

Except in case of very young children, it is generally not a good plan to assist pupils in their answers. A boy ought to be allowed to struggle through as well as he can, however imperfect his attempt; and if necessary he should be obliged to repeat the answer in a more correct form, after some other boy, or the teacher has pointed out the defects. To give an independent answer without help is often a sufficiently difficult task on a child; but this very difficulty renders it a most valuable intellectual exercise. It trains him to a habit of self-reliance, teaches him to arrange his thoughts in logical order, and to express them in full and correct language. Some teachers, by way of assisting children, have a habit of suggesting an answer by repeating the beginning of it, allowing the child to catch up and finish it. Teacher, "Repeat avoirdupois weight." Child hesitates, or perhaps commences to repeat some other table by mistake, and the teacher helps him with "Sixteen drachms —," which at once gives the clue. Teacher, "What city lies near the mouth of the Mississippi?" No answer. Teacher, "New Or —;" child, instantly, "New Orleans!" This habit assumes other forms; some teachers constantly answer, or half answer, all their own questions, or tell everything to the pupil the moment they perceive the slightest hesitation; while others make all corrections themselves, instead of leading the children to do so. All these practices are injurious, and some of them very foolish; they are, in fact, neither more nor less than prompting, and are attended by all its injurious results.

There is nothing in connexion with teaching that should be more carefully guarded against than guessing, thoughtless, or random answers. They are most frequently heard in those subjects requiring much thought, such as grammar. A teacher, for example, asks, "What part of speech is 'whiteness?'" Boy instantly answers, "An adjective, sir!" Next boy, with as little hesitation, "A verb, sir!" and so on, till the last lucky fellow happens to guess rightly, "A noun, sir!" and re-

ceives all the credit. This may appear to the reader very absurd, but he may be assured that in different degrees it is extremely common, and if he be a teacher, let him take care it does not infest his own school. Guessing may sometimes be caused by questioning the children too quickly, and obliging them to answer before they have sufficient time to think. The remedy is in this case sufficiently obvious; let the questions be given deliberately, and let the pupils be obliged to pause and think before answering. They should also, whenever the case admits of it, be frequently required to give the reasons of their answers; the teacher, when he has reason to think they may be answering without sufficient deliberation, accompanying every such answer with, "How do you know?" or some such form of interrogation. These simple precautions, if carried out carefully and judiciously, will be sufficient to check this pernicious habit.

## 6. CLASSIFICATION.

The subject of classification demands the teacher's earnest attention; it is impossible for a school to succeed if the classification be defective. In ordinary national schools the children are very frequently classed too highly; this is often the result of a very laudable desire on the part of the teacher to advance them as quickly as possible. But it is a great mistake; this method of advancement well illustrates the proverb, "The more haste, the less speed." To set a child reading a book, or working arithmetical exercises, too difficult for him, is only to obstruct him, and will invariably retard his progress. The children themselves are always anxious for an advance in class, and their anxiety is usually more or less shared by the parents; this is very proper as long as their promotion is left to the teacher's judgment. But he is often unreasonably importuned to promote children to classes for which they are utterly unfit, and some teachers are weak enough to yield to *these solicitations*. Of the classification of a pupil, no

one is so good a judge as the teacher; and while paying all proper respect to the authority of the parents, and receiving their suggestions with the greatest civility, he should have the courage and firmness to resist all interference with respect to classification. This observation applies to schools that are well or fairly conducted, and where, consequently, the children, if attending regularly, will be advanced at reasonable intervals. But in many of the lowest order of schools, the parents and children are only too often fully justified in their complaints. The classification of the pupils is almost stationary, and their patience becomes wearied out by the length of time they are kept reading the same dull lessons. The teacher sometimes attempts to remedy this, and to escape from their importunities, by removing the children before they are half fit. Hence, in schools of this kind, an inspector is generally sure to find the majority of the children too highly classed. Some examiners may be inclined to attribute the unsatisfactory answering to this fact; but general bad answering is always the result of bad teaching, and too high a classification, while making matters still worse, is often only another effect of the same cause.

When a pupil returns to school after a long absence, say four or five months, it is a very usual practice to place him, as a matter of course, in the same class as before. This is one fertile source of unequal classification; if the pupil have been idle all this time, and if the school be progressing, it is impossible that he can be fit for his old class. Such children should be examined the same as new pupils, and placed in the classes for which they are fit, quite irrespective of their former position.

It sometimes happens that a school suffers by the teacher attempting to maintain a higher class, or a greater number of pupils in his highest class, than the school is able to afford. It is of course a very laudable ambition to create and maintain a high class, but it ought to be the natural growth of the school; and when it is so, it will maintain its existence without any special

exertions, further than the usual labour of teaching the whole school well. Some teachers, however, attempt this by bestowing almost all their time and energies on that one class, and neglecting the rest of the school. This practice is in itself grossly unjust, for the great majority of the children are sacrificed for a few young prodigies at the head of the school. Even for accomplishing the end in view, it is the very worst possible method. The highest class is fed from the highest but one, that from the next lower, and so on down to the first class. There is only one certain never-failing way to maintain a permanent high class, viz., to bestow whatever share of attention is just and necessary on the low and middle classes, as well as on the highest. When this is done, the school can at any time afford to lose a few boys from the highest class, for there will be always pupils in the next lower to step into their places.

When the teacher does not take a sufficiently active part in teaching and superintending the young and less advanced children, their classification is pretty sure to be unequal. For instance, a child will be found in a certain draft of first class so far behind his fellows as to be fit only for a lower draft, and on the contrary, some may even be found in lower drafts who are fit for higher. This confusion is the natural consequence of throwing the whole management of the first class children—teaching, classification, and promotion—into the hands of monitors, and may be considered a certain indication that these classes are grossly neglected.

## 7. NOTES OF LESSONS.

In the following extract, condensed into a small compass, are contained all necessary instructions on notes of lessons; and we give it in preference to original matter, as it expresses, much better than any words of our own, what we wish to say on this subject.

“A lesson naturally divides itself into certain well-defined sections or paragraphs, each section or para-

graph being a stage in its elucidation; and each section again resolves itself into the parts, the facts, of which it is composed. The lesson must be conned over, skeletonized, and well digested. Every step in its development must be clearly laid down before the next is touched upon, and the whole lesson must be a consecutive chain, like a proposition, orderly in the arrangement of its parts, and satisfactory in its conclusions. There should be a separate book, of a convenient size, for each subject; the paper should be ruled [as in the specimens]; the sections or paragraphs should be placed in a column to the left; comprehended under these in an adjoining column should be the subdivisions of each paragraph [if any]; and in a third column, the notes or facts comprehended under the subdivisions should be arranged. All this implies a careful analysis of the subject-matter of the lesson, and also the exercise of the teacher's didactic skill in arranging the parts in the most favourable order for teaching. The notes should be clear, simple, concise, and nearly symbolic; the narrative should appear in the catchwords, but the narrative form of expression should be avoided for brevity's sake; the skeleton of the lesson must be plainly pictured forth; there must be no displacement of a part—no member wanting; the pith and marrow must be easily filled in; the arrangement must be sequential, logical, and comprehensive; and the illustrations must be aptly, but briefly, represented. . . . . A teacher who methodically prepares notes of lessons on the different subjects on which he instructs his pupils, from day to day, will at the end of a few years possess such an invaluable accumulation of well-arranged and well-digested lessons, as will be useful to him all through life; but, more important still, he will have so disciplined his mind, so mastered the details of his business, and systematized his labours, that his occupation will be rendered more agreeable, his teaching more effective, and his services generally more precious.”\*

\* General Report of P. J. Keenan, Esq., Head Inspector: 1858.

## SPECIMENS OF NOTES OF LESSONS.\*

## No. 1. LESSON ON PROPORTION FOR PUPILS BEGINNING THE SUBJECT.

Paragraphs.	Subdivisions.	Notes.
1. Principles.	<p>a. Ratio.</p> <p>b. Proportion.</p>	<p>Definition and explan. of: notation: reading: terms (antec. and conseq.): measure of <math>\left( \frac{\text{antec.}}{\text{conseq.}} \right)</math>: ratio greater or less as quotient: ratio unaltered if measure unaltered: terms may change without altering ratio: terms may be mult. or divided by same, and ratio not changed, since quot. not changed.</p> <p>Two ratios unequal if measures un = : 2 ratios = if measures be = : definition of Proportion: 1st test of Prop. (the 2 measures being =): if test fail—no proportion: notation of a prop.: signs = and :: how read a proportion: terms: proportionals: extremes and means: 2nd and better test (prod. of extremes = prod. of means): prop. not destroyed if terms of either ratio be mult. or div. by same.</p>

\* From Appendix E to the same Report.

Paragraphs.	Subdivisions.	Notes
2. Application.	a. To abstract numbers.	Given prod. of extremes and one extreme—the other? : same with means : any one of 4 terms wanted—found by (2nd) test. wanted a mean— $\frac{\text{extrem.} \times \text{extrem.}}{\text{rule}}$ $\frac{\text{given mean}}{\text{wanted an extreme}} = \text{rule},$ $\frac{\text{mean} \times \text{mean}}{\text{given extreme}} :$
	b. To measurable quantities.	Principles applicable to measurable quantity : example, quantity and price : ratio of 2 quantities = ratio of their prices : of two quantities and their two prices (4 terms in all), any wanting term <i>findable</i> : same of money and its interest—of men and their work—of 2 steeples and their 2 shadows, &c., &c., &c. : rule for stating a question : rule for working it when stated.

## No. 2. LESSON ON PENS.

Paragraphs.	Notes.
1. First pen.	Pointed iron or other metal : used on stone, bone, sheet lead, wood, bark, palm leaves : hence rude at first : Cadmus knew no other : Solon's laws written with it about 600 B. C. : Mahomet's secretaries ; Koran written with it : Bible, parts of, probably (commandments, &c.) : Greek stylus (gold sometimes) : Roman do. (description).



No. 2. LESSON ON PENS—*continued.*

Paragraphs.	Notes.
2. Second pen.	Calamus: used with Egyptian papyrus (latter invnd. abt. 4th cent. B. C.): calam.: not yet used in Rome: used in August <sup>a</sup> . age there: use further exten <sup>d</sup> . by invention of parchment mid. of 2nd cent. B. C.
3. Third pen.	Goose quill: easy trans <sup>a</sup> . to from calamus: Lincolnshire fens: Somerset best: Irish worst: Russia: Hudson's Bay: crow: swan: eagle: clarification: pen mak <sup>r</sup> . machine.
4. Fourth pen.	Return to ancient materials: Birmingham, &c. (manufacture): merits as compared to quill: mode of preserving.
5. Conclusion.	Moral weapon: "mighty instrum <sup>t</sup> of little men:" influence on mind: preserver of ancient learning: diffuser of thought and knowledge: destinies of mankind.

## No. 3. ANALYTIC LESSON; CLOTHES.

Paragraphs.	Notes.
1. Coat.	How produced: tailor, cutter: needle, scissors, &c.
2. Colour.	Blue: Indigo, vegetable: Spain, India, &c.
3. Material.	Cloth: lining—cotton, linen (pod and fibres): thread (silk of cocoon and fibres of flax): buttons—horn, bone, metal, ivory, pearl, and gilt.
4. Cloth.	How produced: weaver, loom, shuttle: thread, woof, warp, reels.
5. Thread.	Spinning-wheel and band—machinery—carding: wool: shearing, sheep.
6. Conclusion.	Man born naked: can clothe himself: advantages of this capacity: imposed as a penalty: God necessitates man to work and endow the faculties bestowed on him.

## CHAPTER II.

### THE LESSON BOOKS.

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#### FIRST LESSON BOOK.

##### 1. THE ALPHABET.

THE method of teaching the alphabet is a subject that has at all times engaged the attention of practical educationists. It is agreed on all hands that to learn it is a very difficult task for a child, and numerous ingenious plans have been proposed with the object of smoothing the difficulty. These various contrivances have, however, with a couple of exceptions, been rejected by teachers. The exceptions, which will be presently described, are the method adopted in our national schools, and the phonic method used in Continental countries.

In learning the alphabet, three things have to be mastered; 1st, the shapes of the letters; 2nd, their names; 3rd, their powers or sounds. The names of the letters are perfectly distinct from their sounds in words. Repeat the letters of the word, "top;" the sound thus produced is *tee-ō-pee*, a word of three syllables, quite unlike the monosyllable *top*. The child has to learn not only the names of the letters *t*, *o*, and *p*, but also the additional, and totally different fact, that when they are put together, they make the sound *top*. To avoid this difficulty, it was proposed to change the names of the letters, and to give them names as nearly as possible the same as the sounds they have in words. This is the phonic method, which has been adopted in some Continental countries. It has not gained much favour among English-speaking people, though its introduction has been attempted. Two difficulties lie in our way. First, the frequent recurrence of silent letters. Second, the

greater number of our letters have different sounds in different circumstances; if the names of these letters are to be the same as their sounds, then each of them must have two or more names, and how is a child to know when to use one in preference to another? These difficulties are more or less felt in all languages; they are not insurmountable in ours, but whether they would more than counterbalance the advantages of the phonic method, is a question that appears to require for its determination a more extended experience.

Perhaps, after all, a child will be found to learn to read by our own method, as quickly, and with as little difficulty, as by any other; it is simple, easily understood and practised by teachers, and it teaches not only the names of the letters, but also to some extent their powers or sounds in combination. Formerly a child was obliged to learn the whole alphabet before he was put to spell the simplest words. To learn the names of twenty-six strange marks would be sufficiently difficult even for an adult; it is indeed a sad task for a little child, entirely unaccustomed to such meaningless abstractions. We follow a different plan; we break up the alphabet into parcels, and as soon as the child has learned a certain number of letters, he is taught to apply them at once to the spelling of little words. Another portion is learned and applied in the same manner, and so on, till he has mastered the whole alphabet. This is an outline of the method; some practical suggestions shall now be given on the mode of working it out.\*

## 2. FIRST SECTION.

The children who are beginning to learn the alphabet should, in the very first instance, be put to learn the group of letters at the top of the first lesson. Some

\* See the article "On teaching the alphabet" in "Papers on Popular Education" (Marcus and John Sullivan, Dublin), for more extended information on this subject.

teachers would divide the alphabet into smaller sections, and teach the children to spell after learning three or four letters. This is perhaps a matter of no great importance; it is here supposed that they learn these eight or nine letters before spelling. The best way to teach them is by constant individual cross-examination, all the others looking on, and ready to correct a mistake while each is exercised. It is a good plan to vary the exercise by placing the pointer in the hand of each child in turn, and requiring him to point out the letters as the teacher names them. If carefully taught, they will learn these letters in a couple of days; they should not proceed farther till they are perfectly familiar with them. They are then taught to spell the little words; this is commonly a difficult step, but the difficulty almost disappears after the first two or three lessons. Commencing (suppose) at the word *an*, the teacher spells it slowly and distinctly from the tablet, pointing to the letters as he names them; the children repeat after him either simultaneously or individually, "*a, n, an.*" The same with the word *ox*; this should be done repeatedly, till the children can all do it themselves.

Reading and spelling should go hand in hand from the very beginning;\* as soon, therefore, as they have mastered the spelling of a few words, they should be taught to read them. The teacher will be careful to make them distinctly understand, without any formal definition, what they are to do when asked to *spell* a word, and what when asked to *read*. To prevent them from confounding these and other processes, the teacher, while they are in Section I., should frequently put such questions as the following on the different words. "Spell† this word;" (pointing to *ox*;) "read it;" "How many letters in *ox*?" "Which is the second letter?"

\* If this suggestion be attended to, it is a matter of no practical consequence whatever, whether the child, when he comes to a word, be taught in the first instance to spell it, or to read it.

† A child should be always made to *pronounce* a word after spelling it.

"Which the first?" "What word is this?" (pointing to *an*). "What letter is this (pointing to *o*; if the children have been badly taught they are likely to answer "*o, x, ox*"). "Spell *ox*," (without pointing to it). "Point out *ox*" (the child taking the pointer), "show *an*," &c., &c. But the chief part of the teaching should consist in exercising the children in spelling and reading the words off the tablet, according as the teacher points them out. And it will be better, during this lesson and some of the succeeding ones, that the words be taken promiscuously oftener than in their natural order. When the children can spell and read every word in the lesson, not only in the order of the book, but also when selected singly and promiscuously, and when they can answer all the questions already given on any of the words, then, and not till then, they are fit to be advanced to the second lesson. The second and succeeding lessons of this section are taught in exactly the same way, but there will be much less difficulty if the children be well grounded in the first. By the time they have arrived at the end of the first section, if the preceding instructions have been attended to, they will know the shapes and names, and to some extent the powers of the letters; and they will also have a practical knowledge of what it is to spell and to read.

### 3. SECOND AND SUCCEEDING SECTIONS.

Let the teacher bear in mind that the great object of the First Book is to teach the children to read and to spell; if he remember this, he will avoid certain faults to be noticed hereafter, to which many teachers are liable. Exercises in reading and spelling, therefore, should occupy the chief portion of the lesson time. There are four principal ways of exercising the children in mere word teaching, and it will be useful to note them separately:—

- 1st. Spelling the words off the tablet or book;
- 2nd. Spelling from dictation;

3rd. Reading at sight the words chosen promiscuously by the teacher;

4th. Reading in the ordinary way.

These different exercises should be used in turn, and a proper portion of time should be devoted to each.

*1st Exercise, spelling off the tablet.*—Each child, looking on the tablet, spells word after word through a whole sentence, or more if the teacher think necessary. This is a very useful exercise, when used moderately. It was formerly carried to excess in many of the schools of this country, the children being often forced to spell through a whole book without reading one word; and this is probably the reason why some modern educationists have what appears to be a very unfounded prejudice against it. Make the children repeat the letters with moderate quickness, each letter being enunciated and heard distinctly; be careful that they be not repeated too slowly, as this weakens the association between the names of the letters and the pronunciation of the word. If a child is unable to pronounce a word after spelling it, let him try it once or twice again; and if he finally fail, let some other pupil of the class tell him. Never do anything for a child that he can do for himself.

*2nd Exercise, spelling from dictation.*—The teacher repeats the words for the children, who are required to spell them without looking on the tablet or book. It will be seen that this differs from the spelling exercise last spoken of; in spelling from the tablet, the child gets the letters, and has to make out the word; in spelling from dictation he gets the word, and has to make out the letters. It will be better that the teacher give a whole phrase to each child, instead of single words. He repeats the phrase very distinctly, and the child, having repeated it in like manner after him, spells the words from the commencement as they occur, without omitting any, even the shortest. Be sure that he pronounce each word after spelling it, and if he omit one, let him be considered as missing, and let some other child correct him. This last restriction—that the children

remember all the words—is most useful, and should be insisted on. For first-class children a phrase of five or six words is quite long enough.

*3rd Exercise, reading at sight words chosen promiscuously.*—This is one of the most useful of all kinds of word teaching, and ought to be practised extensively. The teacher points to the words one by one without following any order, but selecting them at random up and down through the lesson, and as he points to each, the child reads it. Each child should read a dozen words or so before the teacher leaves him for another. If a child miss a word, let him spell it; and if he fail in making it out by spelling, let some other pupil tell him, but he should not give it up till he has tried every effort. The teacher must remember that this exercise is not merely for the purpose of examination (though for this too it answers admirably), but to practise the children in reading words at sight.

*4th Exercise, ordinary reading.*—This need not be described; but there are a few pernicious errors in connexion with it, which are very general, and which must be noticed. It is often carried to excess, that is, the greater part of the time of the tablet lessons is devoted to it, while other equally useful verbal exercises are neglected. And to make matters worse, it is often carried on in a most objectionable way; the first boy reads the first sentence, the second boy the second, and so on, the children taking up the recitative themselves, till the whole lesson has been read through, when perhaps they commence and go over the same route again and again. And if a child hesitate at a word, he is immediately told it, and repeats it like a parrot after his instructor, without using the slightest effort of his own. This lazy way of teaching is very prevalent among monitors; there is a strong temptation to fall into it, as it calls for no thought or trouble from either teacher or pupil. The most obvious result of this practice is that the children very soon get off the lesson by rote, and *once this occurs, they will no longer read it. They may*

be looking on the tablet, but they are not looking on the words; they are merely repeating, and for any improvement in reading they may as well be idle. Children repeat lessons in this way with so much gravity, and fix their eyes on the tablet with so much apparent attention, as to deceive any one except an experienced teacher or examiner. It is easy, however, to show that they are not reading, but repeating. After one of them has commenced to read, let the examiner, after encouraging him to go on, gradually withdraw the tablet and put it aside; he will find that its absence makes no difference whatever, the child continuing to repeat the words with the same grave attention, till he arrives at the end.

Wherever this vicious mode of teaching prevails, the children are generally advanced from lesson to lesson, getting them all off by rote, reading them smoothly, and to all appearance progressing satisfactorily, while they are in reality acquiring scarcely any knowledge of the individual words, and are making little or no advance in the art of reading. They are in fact not learning to read at all, but only to repeat certain words by rote; a child can no more learn to read in this way, than he can by learning to repeat "The history of Cock Robin" from constantly listening to his nurse. A simple test will prove the truth of these assertions. Ask a child who has been taught in this way, to read some of the lessons already gone over. Observe how he winces and hesitates until he recognises the lesson to be an old acquaintance, when the difficulty immediately vanishes: he now travels along the well-known track with the greatest facility. Examine him now in reading at sight the individual words selected at random through the lesson, *in every case hiding with the pointer the words immediately preceding the one under consideration*; with great probability he will fail in deciphering not only the most difficult, but even some of the simplest words of the lesson he has read with such apparent fluency. There are many schools of an intermediate class, where the teach-



ing is not quite so bad, and where the effects of the practice are not so aggravated as here pictured. But let the teacher always bear in mind, that whenever this mode of teaching is carried to excess, it retards in a greater or less degree the children's progress in learning to read.

These four kinds of exercises should all receive proper attention. It is not meant that they should all be used in the same lesson, for a lesson might consist of only one or two of them according to circumstances; but they should be taken up in their turn, and a sufficient amount of time should be devoted to each. Generally speaking they ought not to be mixed, that is, once the children have commenced at one kind of exercise, they should continue at it for some time without wandering to any of the other three; when the teacher thinks they have had enough of it, let them change to another.

Monitors are specially liable to fall into the vicious habits of teaching now described, as much from indolence and thoughtlessness, as from unskilfulness, for good teaching generally imposes a greater amount of thought and labour on the teacher than bad. The teacher must therefore exercise a vigilant supervision over them, especially over those that teach the first class children. They should be made well and practically acquainted with the four ways of exercising them, and should be taught to give each a due share of attention.

Some educationists think that spelling is useless; that children can and ought to learn reading without its aid, by simply teaching them to name the words at sight according as they are pointed out. This is what is commonly called the "look and say" method. Children may be taught to read in this way, but nevertheless we do not think it a good plan when used without spelling. Among other evil results, it begets a great amount of decision and guessing; for if a child happen not to recognise a word, he must either guess at it or be silent; in either case the teacher or some one else must set

him right, for he has nothing to fall back on, that will enable him by his own exertions to discover the word. But if a child who is a good speller happen to miss a word in reading, very probably he will have the gratification of setting himself right without assistance, by spelling it.

#### 4. SUBJECT MATTER.

The instructions now given relate to word teaching, but there are some other matters that ought to be attended to, about which it is right to make a few remarks. From the very commencement the children should be accustomed to pay attention to what they read. For this purpose they should be questioned on the meaning of every sentence of their lessons. For first class children it should be carried on in the following manner. One child reads as much of the lesson as relates to one subject, which in the First Book is usually only a single sentence. The teacher then puts such questions as are necessary to elicit the meaning; and as soon as he finds by their answers, that they understand the general drift of the sentence and the meanings of the words, let him deal in like manner with the next, and so on to the end of the lesson. Some teachers, imitating what is done with the more advanced classes, take the tablet in their hands, turning it away from the children while examining on the subject matter. It will be better not to do this; the tablet should not be removed from its place, and the children should in all cases be allowed to look on the sentence while they are questioned on it. The questions should be few and simple, and should be so framed as to render it necessary for the children to attend to what they read in order to answer them. Constant reference should be made to the tablet, the teacher frequently requiring the children to point out the principal words according as they occur in their answers. The teacher is specially cautioned against the introduction of irrelevant foreign matter, or anything that does not directly bear on the meaning of the lesson. This

matter will hereafter be more fully noticed, but it is right to allude to it here, as teachers are perhaps more prone to wander from the lesson in the First Book than in any other. Let it not be forgotten that during what is called the "Reading lesson," the children should learn spelling and reading, to attend to what they read, and to understand it, *and nothing else*. The following is a specimen of the kind of questions that should be asked on the matter of a sentence.

"That bad man got these gold cups by theft."

How did the man get the cups? (by theft). What do you call a man that gets a thing by theft? (a thief). What is a thief? (a person that steals). What did this man steal? (the cups). What were the cups made of? (gold). Would he get much for the cups, if he sold them? (yes). Why? (this question brings out the value of gold). Tell me something you know that is made of gold? (if one of the things named by the children, a ring, a piece of gold money, a brooch, &c., be at hand it should be shown to them). Point out the name of the cups that the man stole. Show the name of the gold they were made of. What kind of a man was this? (a bad man). How do you know that he was a bad man? (because he stole the cups). Is it right to steal? (no). Who tells us not to steal? (God).

### 5. OTHER SUGGESTIONS.

When the children are able to acquit themselves on all the four verbal exercises already mentioned, above all, when they can read at sight without hesitation the words chosen promiscuously, and spell them from dictation; when, besides, they are able to answer simple questions on the subject matter; then, and not till then, they are fit to leave the lesson. It would be scarcely necessary to remark that these tests should be always applied, did we not know that in many schools the children are advanced as soon as they can read the lesson

through from beginning to end, and spell the words. None but the teacher should give a new lesson, and there should be always an examination to test the children's fitness for advancement. This gives it an air of importance; and even though the teacher should be convinced of their fitness, still the form of examination should be gone through. Many mischievous consequences result from want of caution in this respect. In some schools, any one who happens to teach the draft may give a new lesson, and sometimes even the children themselves *take* one when they think themselves sufficiently prepared. In all such cases they are advanced before they are half fit, and thus they run through the book hastily and superficially, without gaining any real knowledge of the lessons, and find themselves in the end almost as helpless as when they set out. If there be anything in the teaching of first class children that requires special care, it is that they be not advanced from a lesson till they are thoroughly acquainted with it.

All the first class children, except those of the highest draft, should read exclusively from the tablets; those of the highest draft may, if the teacher wish, read one lesson per day from the books, and the rest from the tablets. The tablet should be hung opposite the middle of the draft circle, slightly above the level of the children's eyes. It should be left hanging during the entire lesson: *the teacher should never hold the tablet in his hands while teaching.*

To determine whether the children are fit for advancement to the Second Book, precisely the same tests are applied, as in case of removal from one lesson to another. If a child be able to read at sight, and spell the words of any difficult lesson towards the end of the book, without hesitation, and if he can answer in such a manner as to show that he understands the meaning of what he reads, he is then fit for Second Book, but not before. These tests, simple and obvious as they appear, are not always applied, and consequently you

will often find children who have been for a considerable time reading Second Book, but who fail to read off the more difficult words of the first class tablets.

## SECOND AND SUCCEEDING LESSON BOOKS.

### 6. READING.

Reading is an art that is learned by imitation, and in this respect it resembles speaking, writing, singing, &c. The teacher is the children's model, and their progress in the art depends, first, on the excellence of the teacher's reading; secondly, on the care taken to make them imitate him; and, thirdly, on the amount of practice they get.

It is not in every teacher's power to become a finished reader; in case of a numerous class of teachers there are many obstacles to prevent this, or at least to render its attainment extremely difficult. But there is no teacher who, if he be only moderately industrious, cannot learn to read with fluency, distinct articulation, and judgment. To improve in the art, a teacher must practise reading aloud; every teacher who wishes to read well, will devote half an hour every day to this useful purpose. We have set out with the maxim that the reading of the school depends on the reading of the teacher; this must be clearly understood. A teacher, without being a good practical arithmetician, may make his pupils expert calculators; by the aid of copy-pieces he may teach writing well, even though his own penmanship be indifferent; but no person who does not himself read well, can teach children to be good readers.\*

While the reading lesson is going on, the teacher

\* "In order to make good readers of your pupils, it will be necessary for you to be good readers yourselves. I do not say, that it will be absolutely necessary for you to be what is called accomplished readers. This may be beyond your power. . . . But you should at least be intelligible and correct readers. For how is it possible for a person to exemplify what he teaches, if there be any defects in his

should frequently read a sentence or so, for the children's imitation. This model sentence should be read very slowly, much more so than in ordinary good reading, and every letter should be brought out with the greatest distinctness. One short sentence will generally be quite enough; and the moment the teacher has finished, the child should follow at once, beginning on the same sentence, and imitating him, not only in that, but also in all the rest that he reads, as closely as possible, in articulation, rate, tone, and general expression. The teacher will be particularly careful to make his monitors read like himself; and when teaching, they should also, like him, frequently read sentences for the pupils' imitation, observing the same rule as to slowness and distinctness of articulation. By these means the teacher will gradually impress his own manner of reading on the school.

The great and almost universal faults of pupils' reading are excessive quickness and indistinctness. The children scramble over the sentences in the greatest haste to reach the end, without the least glimmering of reflection on what they read. Then the words are not half articulated, and many of the smaller ones are either wholly omitted, or slurred over so slightly as to be imperceptible. To counteract this tendency to hurry and indistinctness, to make the children read with deliberation, and give every word and letter a distinct firm articulation, this is the task that the teacher should employ all his care and exert all his energies to accomplish. It is the task on which the success or failure in teaching reading entirely depends; it is not a difficult one, but it requires constant attention.

There are certain consonants which children are more liable to pronounce indistinctly than others; *s*, *t*,

articulation, or vulgarity in his pronunciation?" From the preface (note) to Dr. Sullivan's Literary Class Book. This book is in every teacher's hands, and it is therefore unnecessary to make further extracts here; but the reader is referred to it for all necessary information on the subject of reading.

and *d*, for instance, when they come in the end of words, are commonly only half articulated. The *ed* and *t* of the past tense and participle of verbs are seldom fully pronounced, and the word "and" is almost universally pronounced "an." When the same consonant ends one word and begins the next, one of them is often suppressed. The following examples will illustrate these observations; the letters in italics are those that are liable to indistinctness or omission. "When she *reached* the end of the lane." "When they were just going to bed." "On the *sixth* day." "All kinds of *beasts* and of cattle." "That beautiful material called silk." "In its perfect state." "Six *casks* of water." "They were *first* made use of." "Feathered game." "A *hurried* dinner." "My *uncle's* son." In all these cases, the teacher should insist on a distinct articulation of the separate letters, having himself pronounced them for imitation, and, if necessary, causing the children to make a short pause between the words, to enable them to bring out the sounds more clearly.

A person who is able to read may use the art for two different purposes; either in reading for himself, or in reading for others. In reading for himself he may understand the passage without complying with the rules of good reading, without, indeed, articulating the words at all, for he takes in the language by the eye, and not by the ear. Reading for others is quite a different thing; the listener can only make use of the ear, and everything, therefore, depends on the goodness of the reading. The reader has here a double task to fulfil; he has to understand what he reads himself, and to make his hearers understand it. The distinction between these two is very often not sufficiently attended to in schools. The pupils read as if no one listened, as if each merely read for himself; with the book placed close to the face, which is bent down to meet it, he hurries over the words in a low mumbling voice, unintelligible to every one except to those standing beside him. Let the pupil, then, never for a moment be al-

lowed to forget that he reads for others—for the rest of the class and for the teacher—and let him be made to pitch his voice and articulate his words, so that all may hear and understand him. It is an excellent plan, which might frequently be resorted to with great advantage, to cause all the pupils of the draft to close books and listen to him who reads, the teacher or a pupil interrupting him, and asking to have the passage read over again, whenever he fails to make himself understood. And in all cases, he should be obliged to hold his head erect, to keep the book at a moderate distance from his face, and in every other respect to comport himself as becomes a person who reads for others.

The teacher is advised to make very little use of those technical rules for reading given in books on elocution. It is right for a teacher to know these things, as they form a part of the grammar of the language, but they are only an unnecessary incumbrance in teaching to read. It may, perhaps, be questioned whether anyone ever practically improved himself in reading by their means; "No person ever became a good reader by being taught to read by rule."\* If the teacher read well, the children, provided they be carefully taught, will also read well, by merely imitating him, and without any knowledge of rules whatever. Indeed, all rules resolve themselves into these two simple principles:—(1), When the sense is incomplete, the intonation is a rising one; and (2), When the sense is complete, the intonation is a falling one.

The children should not be got to read in succession, beginning at the first boy of the draft and ending at the last; they should be selected promiscuously, and each boy who is called on should know where to begin. This arrangement tends to check inattention on the part of those listening, as each is liable to be called on without notice. A boy should be understood to read on till he is told to stop by the teacher, and each should

\* "Literary Class Book," page 9.



be allowed to read several sentences or half a page, according to the time available.

The term "Reading lesson" on the time-table is understood to include not only reading, but also the explanation of the subject matter. The proportion of the time that should be given to each on any particular occasion, depends entirely on the circumstances of the lesson. Sometimes, as for instance when it is a simple narrative, very little explanation will suffice, while on other occasions it will take considerable time and trouble to make the pupils understand it. Occasionally—indeed, pretty often—the whole time should be devoted to reading; and on these occasions, the best plan is to cause the pupils, as already suggested, to listen with closed books to the reader, who should be obliged to turn back whenever he fails to convey the sense. Explanation is carried to excess in some schools, reading being comparatively neglected, while in others, the case is reversed, the children being allowed to read lesson after lesson, with scarcely any attempt to make them understand the meaning. It may be laid down as a general rule, subject, of course, to exceptions in particular cases, that about two-thirds of the time should be given to reading, and one-third to explanation.

It has been already remarked that the success of the children in learning to read, depends, among other things, on quantity; this important principle must be always borne in mind. Careful correction will render a child's pronunciation sufficiently pure, but all the vigilance in the world will not give a boy fluency without constant practice. Many teachers, forgetting this, occupy almost the whole reading time with a never-ending series of interruptions and minute corrections. The quality of the reading must, indeed, be attended to, so far as is useful, but it is only quantity that gives facility. A child learns to read much in the same way as he learns to play on a musical instrument. No one ever yet became a proficient on the flute or on

the violin, without constant and long-continued practice; and it is just the same with reading. Give the pupils, then, sufficient practice; let them read as often as possible, and in large quantities at a time. By following these and the preceding directions, you will make your children read fluently and sensibly, and in far the greater number of national schools, this is all that can or ought to be expected.

### 7. EXPLANATION OF SUBJECT MATTER.

To question a child on what he has just read, for the purpose of making him reflect on and understand it, one would think a very simple matter; yet the method of putting it into practice has given rise to much difference of opinion. Many teachers are in favour of what is called "incidental teaching," which means that various foreign matters are introduced, not at all connected with the subject of the lesson, but usually suggested, either directly or indirectly, by the individual words. Grammar, geography, spelling, rules for spelling, derivations, &c., all pass in review within the compass of one short sentence, the variety being limited only by the fertility of the teacher's invention. This way of teaching is unfortunately very general, and it is mentioned here only for the purpose of condemning it. "A time and place for everything, and everything in its proper time and place;" was this maxim intended to apply only to the management of pens, slates, and copy-books? On every good time-table there is a sufficient time specially allotted for each subject; and it is one of the simplest, and at the same time one of the soundest maxims in school management, that each subject should be taught at the time set apart for it, and at no other. Here, however, almost all the school subjects are crowded together during one half hour; and the time that might be profitably employed in teaching the children to read and to understand the lesson, is frittered away in an attempt to teach everything, which commonly ends in teaching nothing.

It is a task of no small difficulty to read a book with such attention as will enable the reader to catch the whole of the writer's meaning, and remember the substance of his discourse; it is, indeed, so very difficult, that very few persons ever attain the power of doing so with any degree of perfection. This power can be improved by practice, and it is the business of the teacher to cultivate it by affording the children every possible opportunity of exercising it. But how can a child pursue the thread of what he has read, when his attention is perpetually distracted by questions on every possible subject that the teacher's ingenuity can suggest? Nor are the pernicious consequences of this kind of teaching confined merely to the reading lessons; in fact, it does not admit of any consecutive thinking at all, either on the subject of the lesson, or on any other subject. With perhaps twenty minutes before him, the teacher begins to examine, and has scarcely got through a couple of sentences when the time is expired. The child has been asked to spell some words, has been learning some fragmentary scraps of grammar and geography, with several other disconnected matters, but of the proper subject of the lesson, he has learned little or nothing, and, what is far worse, has made no progress in the art of attending to what he reads. This method fosters the tendency to wander from subject to subject, to which all people, especially children, are more or less inclined, and which is one of the greatest obstacles to literary progress. So far from developing the intellect, therefore, as some imagine, it only tends to paralyze it, by weakening the power of concentrating the thoughts continuously on any given subject.\*

\* "There is another fault to which it is right to direct the attention of the masters: I mean the habit many indulge in of departing on the slightest pretence from the subject matter of the lesson, and falling into some beaten track, that has been already, often and often, travelled over with the children. For instance, if the teacher is asked to examine a class upon the lesson on 'The Stag,' he will take occasion to give a long examination upon the geography of the Bri-

The proper method of questioning on the subject of a lesson is sufficiently simple. Let the teacher bear in mind that he has before him the double task of making the children understand the language, and remember the facts, and let him ask no question that does not tend, either directly or indirectly, to forward one or the other of these objects. Let their attention be not distracted by the introduction of any foreign matter: there is to be no geography, except so far as to have a place pointed out on the map, or otherwise identified, if its name should occur in the lesson; grammar must be altogether avoided; there are to be no rules for spelling:—for all these subjects there are separate and suffi-

tish Islands, and will thus occupy the whole of the time that should have been devoted to ascertaining what information the children had acquired regarding the lesson itself. This is an abuse of the incidental method of teaching, as it is called, by means of which a master may once or twice make a display, and impose on uninitiated persons. But the *trick* will soon be discovered, and cannot fail to bring discredit upon the person who has recourse to it.”—Report of Edward Butler, Esq., A. M., Head Inspector: 1849. Again, in his report for 1848, Mr. Butler writes: “The most advisable course for the teacher to adopt would seem to be to prepare beforehand each day’s lesson: he will then come to his school ready to meet the difficulties that may arise; his explanations will be given with confidence and accuracy, and he will not be tempted to follow the mischievous practice of some, who, under pretence of carrying out what is called *incidental teaching*, are ever travelling away from the subject of the lesson, and treat of everything but the very matter in hand.”

“With the old, untrained, or less informed teachers, the questions generally are of a mechanical or routine sort, inhering, so to speak, too much in the words of the text, and demanding for their correct answering hardly any exercise of thought on the part of the pupils; while with the young and clever, they often assume a wholly opposite character, break off in ‘brave disorder’ from the vulgar bounds of the subject in hand altogether, and extend to an indefinite variety of the most incongruous matters—touching on everything, and dwelling on nothing—with no kind of sequence or coherence among them for two minutes together—nothing linking itself with what goes before, or giving support to what comes after—but the whole composed of such heterogeneous and discordant elements, and brought together so rapidly, that it would be as idle to talk of a man’s attending to the objects which glance upon his field of vision through the window of a

cient periods set apart on the time-table. The meanings of words must be explained, but only so far as they bear on the drift of the context; the teacher must steer clear of all mere grammatical inflections and distinctions. The best questions are generally those that require a thorough understanding of the text in order to answer them. As a general rule, they ought to be so framed as to oblige the pupils to answer in their own words; it is not only quite possible, but often actually the case, that the children can answer readily in the words of the book, without understanding either the argument or the language of the lesson. The main subject must be kept constantly before their minds, their curiosity in it should be excited, and their interest sustained throughout; hence the teacher, while taking care that all the difficult words and phrases be explained, must endeavour to bring out the bold features of the lesson, and not waste his time by dwelling too minutely on illustrations, or other subordinate parts of the context. Without allowing any important link to be lost, he must give them a connected knowledge, a kind of bird's-eye view, of the whole. By at-

railway carriage, as to expect children to attend, in any true sense of the term, to any subject so treated. . . . The teachers, thinking themselves at liberty to depart on every occasion from the subject really before them, into what is called *incidental teaching*, which each makes embrace whatever his fancy prompts him to include in it, at length become wedded to a stereotyped set of questions into which they are ever sure to diverge."—Report of William M'Creeedy, Esq., Head Inspector : 1850.

"The interrogative method is too frequently, a puerile wandering from subject to subject, aimless in object, and unproductive of permanent and useful results. Teachers should remember that skill and aptitude in proposing a connected series of questions, which, taken in systematic order, constitute a correct summary of the entire contents of the lesson, are justly regarded as distinguished marks of their professional success. . . . When called on to examine a class, their manner is often hurried and confused, and after putting a few desultory questions, they seek relief from an irksome task by examining their pupils on spelling, parts of speech, tables, &c."—Report of J. G. Fleming, Esq., Head Inspector : 1859.

tending to these directions, the teacher will gradually accomplish three important results: he will give the children a knowledge of the interesting and important matters treated of in their lesson books; he will enable them to understand their own language; and he will teach them the rare and valuable art of reading with attention.

### 8. SPECIMENS.

"After the death of Abel, Seth was born to Adam and Eve. He was a good man, like Abel, and served the Lord. But after many years, his children, and children's children, mixed with those of Cain, and became so wicked, that God said he would destroy them. And he gave warning of this to Noah, who was a just and good man, &c. &c."—SECOND BOOK.

Who was born to Adam and Eve after Abel was killed? What kind of a man was Seth? Whom was he like? Whom was he not like? Why was he like Abel? Did Seth's children always remain good? How long was it till they became bad? What made them wicked? Is it right to keep bad company? What harm does it do? What bad company did the children of Seth fall into? What kind of people were Cain's children? How did they all turn out at last? Was there anything to be done to them for it? Who was going to destroy them? What means to destroy them? Were they all—every one—to be destroyed? Why was not Noah to be destroyed? Did God tell anyone what was to happen? &c.

"This useful animal (the rein-deer), the general height of which is about four feet and a half, is to be found in most of the northern regions of the old and new world. It has long, slender, branched horns; those of the male are much the larger. In colour, it is brown above, and white beneath; but it often becomes of a greyish white as it advances in age. It constitutes the whole wealth of the Laplanders, and supplies to them the place of the horse, the cow, the sheep, and the goat. Alive or dead, the rein-deer is equally subservient to their wants. When it ceases to live, spoons are made of its bones, glue of its horns, bowstrings and thread of its tendons, clothing of its skin, and its flesh becomes a savoury food."—THIRD BOOK.

Where is the rein-deer found? Name some of the northern regions of the old world. Of the new. What

are regions? What is the usual height of the rein-deer? Tell me one of our animals about the same size. What kind of horns has it? What is the difference between the horns of the male and those of the female? Colour? Does it always remain of this colour? What is to advance? To advance in age? In a journey? In virtue? Do you know any other animal that grows grey as it advances in age? To what people is the rein-deer useful? Where do they live? Point it out. Climate? (Show children the goodness of God in supplying men in every climate with suitable animals, and give examples.) When a Laplander is rich, what riches has he? Has he money, or any other riches? How do you know? What is meant by saying the rein-deer *constitutes* their whole wealth? Do Laplanders want horses? Why not? Cows? Sheep? &c. Is a dead rein-deer of any use? What is the meaning of its being *subservient* to their wants? What parts of a dead rein-deer are useful? What do they make of its bones? Would not iron spoons be better? What is done to the horns to make glue of them? What is our glue made of? (Some information from the teacher on these two questions.) What are its tendons? Could they not buy thread? What kind of food is *savoury* food? Name some savoury food. Why is it called the *rein-deer*?

"Toil on! toil on! ye ephemeral train,  
 Who build in the tossing and treacherous main,  
 Toil on,—for the wisdom of man ye mock,  
 With your sand-based structures and domes of rock;  
 Your columns the fathomless fountains lave,  
 And your arches spring up to the crested wave;  
 Ye're a puny race, thus boldly to rear  
 A fabric so vast in a realm so drear."

FIFTH BOOK: "*The Coral Insect.*"

(Before the pupils read this lesson, the teacher should give them an oral lesson, from carefully prepared notes, on the coral insect. They should be allowed to look on the books while they are examined.)

Whom does the poet address? What are they toiling

at? Why are they called an *ephemeral* train? Meaning of *ephemeral*? Name other things that are *ephemeral*. (Teacher supplies some information.) Where do they build? Why is the main called treacherous? What part of a building is the dome? (the top). What forms the base of the coral insect's structure? (sand). What is a structure? Name some structure that you know. What is a sand-based structure? What forms the dome or top of this structure? (rock). Could man build a sand-based structure with a dome of rock? What kind of foundations must men have for their buildings? What is meant by mocking the wisdom of man? (Accomplishing works that man could not imitate—man's works appear contemptible in comparison). In what respect, then, does the coral insect mock the wisdom of man? In what part of the structure are the columns? (the lower part). What do the columns support? (the arches. Explain that this is a poetical view of the matter—strictly speaking, there are no columns and no arches, in our sense of the terms). In what part of the sea are the columns? (at the bottom). How do you know? (because the fathomless fountains lave them). What fountains are here meant? (Explain that the poet represents the sea as supplied by vast fountains at the bottom; and refer to "The fountains of the great deep.") Why are they called *fathomless* fountains? Meaning of *to lave* the columns? How high do the arches spring? (up to the crested wave). What part of the sea is that? Why is the wave said to be *crested*? How high, then, does the structure extend altogether? (from the bottom of the sea to the top). What is there wonderful in that? (explain that when the poet says, "Your columns the fathomless fountains lave, and your arches spring up to the crested wave;" it is merely a roundabout, but beautiful and poetical, way of telling us that the structure extends from the bottom of the sea to the top, thus showing how vastly large it is.) What is a *puny* race? They are here called a *puny* race in comparison with something else? (with their works). Would you expect



such a puny race to rear a fabric so vast? What is meant by *rearing* a fabric? Is the fabric vast in any other respect, besides merely in its height? (Refer to the vast coral reefs of New Holland). Tell me all the wonders of the coral insect enumerated in this verse. (The teacher, if necessary, helps the pupils to recapitulate.)

### 9. OTHER SUGGESTIONS.

When the children are first introduced to a new lesson, the best way to proceed is generally as follows:— One boy reads some portion, as a few sentences or a paragraph; and when he has finished, the teacher questions the class on it before proceeding any farther. Another boy reads the next portion, which is questioned on in like manner, and so on to the end of the lesson. If the language be considerably difficult, and if the chief object of the teacher be to make the pupils understand it, they should be allowed to look on the books while he is questioning, and in almost all cases this plan might be adopted when he is explaining poetry. But if the language be simple, and whether simple or not, if the pupils understand it, they might in the first instance read the lesson through, after which follows the examination with books closed. Should there be not time for both reading and examination at the same lesson, then one of the two daily lesson periods might be chiefly devoted to reading, while a considerable portion of the other might be given to examination. If a teacher question half through a lesson on some particular occasion, he must take care next time to begin where he left off before. In some schools it is not unusual, if a lesson be moderately long, to find a teacher, while the class remains in it, constantly commencing it, and never reaching farther than the middle; the pupils, therefore, while they can answer very well in the early part of the lesson, know nothing about the concluding portions.

The meanings of words should never be taught *abstractedly* or *singly*, but always in connexion with the

context of the lesson; in other words, when the teacher is examining on, and explaining the subject matter, this is the proper time for explaining the meanings of the difficult words. The time for the reading lesson appears also, naturally, a fit time for teaching oral spelling. Let spelling be carried on by phrases, that is, each pupil spells the words of a whole phrase, in the same manner and under the same conditions as recommended for the first class children (page 113). Each class might, if thought necessary, be exercised in this manner for a few minutes every day, *but during this time they are to be at spelling, and nothing else.* This will be sufficient exercise in spelling from dictation, and will render it unnecessary for the teacher to interrupt his examination on the subject, by proposing isolated words to be spelled. In teaching the class books, therefore, the teacher may altogether neglect the word columns, at the head of the lesson; they are not necessary in teaching either the spelling or the meanings of words.

To what has been said about teaching the class books, we shall add one other suggestion. A teacher ought to make himself thoroughly acquainted with a lesson before he comes to teach it. Some teachers, from constant practice, know all the ordinary lessons so well, as to need little or no preparation. But when this is not the case, the teacher should read the lesson carefully beforehand, and as far as possible determine the manner in which he should put his questions. It is perfectly easy to discover when a teacher has not done this; he is obliged to refer to the book for almost every question, and sometimes reads a sentence or two in an undertone for materials; consequently his teaching is slow, dull, and uninteresting. A good teacher, who is well prepared, is the very reverse of all this. He may be obliged to refer now and then to the book, not for materials, but to catch the thread of the context; he pours forth his questions without the least appearance of hesitation or effort, and excites and sustains the interest of the children in the subject of the lesson.

## CHAPTER III.

## WRITING; WRITING FROM DICTATION.

## WRITING.

## I. CAUSES OF BAD WRITING.

It has been very truthfully remarked, that a school in which writing is well taught is always popular; the people generally have a keen and thorough appreciation of good penmanship; with them a boy who can write a good hand is commonly accounted a finished scholar. In this last opinion they are not wholly wrong; for when the pupils of a school are found to write well, they will generally be found well taught in most of the other school branches. It must be acknowledged that in many of our national schools, the proficiency of the pupils in this most important branch is by no means satisfactory. Various causes have been assigned for this deficiency, the most important of which shall be presently noticed, but they may all be summed up in the single word, "carelessness." Go into almost any school where writing is unsuccessfully taught, and with great probability the following circumstances, in connexion with the writing lesson, will attract your attention. In the first place, the distribution of the copy-books, which with proper arrangements (see page 84) might be effected in two minutes, and in perfect silence, causes here a waste of perhaps ten minutes, besides endless noise and confusion. In the second place, and still more serious, the teacher, instead of being employed as he ought during the writing time, in walking among the pupils, to direct, assist, and encourage, occupies himself nearly the whole time in making pens, writing head-lines, &c.; he leaves the writers altogether to themselves, and has barely time in the end to make a hasty inspection,

*after all the errors have been committed.* This manner of conducting the writing lesson is very general, and in some cases it is even still worse; it is not impossible to find schools where there is no distinct writing lesson at all—where the pupils write their copies individually according as they arrive at school! Many teachers seem to think that when they have supplied the boys with pens and head-lines, they have done everything that is necessary; but this is a great mistake, for the real secret of success in teaching writing, is constant and vigilant supervision.

There is another circumstance which contributes largely to retard progress in writing, and the influence of which is lost sight of too frequently, viz., the imperfect supply of writing materials among the children. This does not always arise from want of sale stock, but often from pure negligence. If you visit almost any national school at writing time, very probably you will find several boys not writing; one has no pen, one or two have forgotten their copy-books at home, another has got none at all, &c. &c. Supposing five pupils out of every 25 are idle—and this is in many cases not over the mark—it is clear, since the improvement of a child depends on the amount of his practice, that the average progress in writing would be *at least one-fourth more rapid*, if all were constantly supplied.

## 2. COPY-LINES; SUPERVISION.

There is no mystery, no peculiar difficulty in the art of teaching writing. Every teacher, however humble his acquirements, provided that he has the proper materials, can succeed in making his pupils write well, if he only attend to a few plain directions, and apply himself resolutely to the task. But he must be earnest about his work, and must communicate his earnestness to the pupils. Let him endeavour to make writing popular among them by every means in his power—by calling attention publicly to those boys who have

achieved good copies, by attaching importance to the subject, and showing himself anxious about it on all possible occasions.

In order that a boy may learn to write well, it is necessary, in the first place, that he have a good model for imitation. Engraved lines are better than those that are written, unless the teacher be a first-class penman, and in all cases they save a vast amount of time and trouble; it is better that the lines be written or engraved on the pages of the copy-books, than on separate pieces. The quality and style of the head-lines are, of course, of the highest importance, especially of the small-hand. It should be *large, round, and plain*; neither too upright and contracted, nor too much sloped and scattered; and it should be entirely free from ornaments or dashes. But, in the second place, the presence of a good head-line is a matter of no consequence whatever to a boy, unless he endeavour to imitate it. This is the second step: it is the most important of any, and at the same time the most difficult. The children must be *trained* to attend to the shape of the head-lines, and to use their best endeavours to imitate them. The real secret of good writing is effort and care on the part of the pupils; the universal cause of the wretched scrawling so characteristic of many schools, is carelessness. The pupils should never be allowed to relax in their endeavours; every lapse into carelessness is not only time lost, but a positively retrograde movement. There is only one way of accomplishing this kind of training—to superintend them carefully and vigilantly, while they are in the very act of writing. Let the teacher walk constantly among them, watching for every error, every appearance of carelessness, and never in any instance allowing it to pass without notice, or, if necessary, censure. It is only by unceasing vigilance that the pupils' endeavours can be sustained.

Carelessness is most commonly exhibited towards the *end of the copy*. Let the teacher direct special atten-

tion to this, constantly warn the pupils against it, and insist that the execution shall be equal throughout. An almost universal tendency among children is to write too small; they generally consider small writing an accomplishment. Against this tendency also the teacher will be obliged to labour incessantly. He must insist that the writing be large, round, and plain, that the letters be uniform in size—in a word, that the pupils imitate the head-lines, not only in respect to the shape of the letters, but also as to their size, and the length of the whole line.

### 3. POSITION; CLEANLINESS; PENS, ETC.

The broad principles have now been stated, but there are other matters equally important, and which must be attended to with equal care. The pupils must be taught a proper position; they must sit upright, neither resting the body on the desk, nor bending the face towards it. The chest must not touch the desk, and the right shoulder must be slightly farther removed from it than the left; the right elbow must be kept within three or four inches of the side. The copy-book should be parallel to the desk, and placed a little to the right; and it may be kept in its place by the left hand. The pen should be held with the thumb and the two forefingers, which should be extended almost straight; the handle must not lie in the hollow between the thumb and forefinger, but must rest against the side of the latter between the two joints. The end of the handle should point nearly to the right shoulder; the hand may rest lightly on the desk, and the pen should move by bending the fingers, and not by the motion of the whole hand. In every one of these particulars, the pupil will go wrong if left to himself. He will lie flat on the desk, with his left ear almost touching it, and his elbows stretched out widely on both sides. His copy-book will be placed obliquely on the desk; the pen will be held by the thumb and *one* finger, his fingers will be

contracted, and the handle will point widely away from the shoulder. These directions are really difficult to be carried out, for the pupils have an almost irresistible tendency to go wrong; it is only by the most vigilant supervision that the teacher can succeed in training them to a proper position.

The children should be obliged to keep their copy-books perfectly neat and clean, the covers, margins, &c., quite free from scribbling or blots. The name of the owner, with the class to which he belongs, *but not another word*, should be written plainly on the outside of the cover. If a boy in writing commit an error, he should not attempt to blot it with his finger; he should let it stand, and draw the pen either through or under it. In no case should the pupils be allowed to take home their copy-books except on Saturdays; even this should be permitted only as seldom as possible, for the books generally come back more or less damaged, and besides they are very usually forgotten at home for a day or two. The neatness of the copy-books, and their general state of preservation, are matters almost as important as the manner of writing, and should be scrupulously attended to by the teacher; it has been remarked that wherever the books are carefully kept, the pupils invariably write well.

Steel pens are, in every respect, better and less troublesome than quill pens, and should be used from the very commencement; it is a mistake to suppose that they cannot be used in writing large hand. After what has been said it is almost superfluous to remark, that all preparations should be previously made for the writing (as described in page 84 *et seq.*); that the teacher in charge of the division at writing, should neither make a pen nor write a head-line during the time; that, in a word, his whole attention should be exclusively devoted to the superintendence of the writers.

The first class children should write copies on slates every day *with long pencils*, and the same pains should be taken to give them a proper position, and a pro-

per hold of the pencil, as in case of the advanced pupils. It will be found the best and least troublesome plan, to write with chalk a copy line for their imitation, on a black board, which is to be hung up before them on an easel. Two or three lines of different stages of advancement—parallels for beginners, hooks for the next, &c.—can be written on the same board for the different parts of the first class, according to the children's proficiency. These lines should be carefully and neatly written, and to prevent loss of time, they should always be prepared before school hours, if the black board can be spared. If the first class children be in this manner carefully trained, they will be able to begin writing on paper immediately on their promotion to the second class. Generally speaking, the whole of the second class children (and of course all above them) should write on paper. This indeed is not very often the case, a state of things chiefly caused by the children of the first class not being trained in the manner here described.

Wherever writing is carelessly taught, the style is unequal and dissimilar; no two copy-books are alike—some are large, others small; some round, others angular; some nearly upright, and some excessively sloped. It is always the reverse where there is careful supervision: the pupils all write in the same uniform style, and in the advanced classes so nearly alike, that you might imagine one boy had written all the copies.

There is nothing in the instructions now given, that every teacher, whose school is provided with the necessary materials, cannot carry out; let no teacher, therefore, persuade himself that he cannot teach writing successfully. It requires only moderate vigilance and care—vigilance on the part of the teacher, care on the part of the pupils.



## WRITING FROM DICTATION.

## 4. TRANSCRIBING.

To be able to write one's own language correctly, is one of the most valuable of all elementary literary acquirements. Of late years the subject has begun to occupy a prominent place in the programme of instruction of our elementary schools; even yet, however, it scarcely receives the amount of attention that its importance demands. As in the case of writing, the proficiency in this branch is still very low in a large section of our schools. Three causes are chiefly concerned in this:—first, the subject is not commenced early enough in the child's school progress; second, it is not introduced by a series of graduated elementary stages; and, third, the pupils do not get sufficient practice.

Writing from dictation should be introduced simultaneously with reading, writing, and arithmetic, that is, at the commencement of the child's school education; instead of this, however, it is almost universally deferred to a comparatively late period, being rarely attempted till the children have advanced to sequel class. And when it is commenced, it is singular that the pupils are generally set to work all at once, without any previous gradation, at a difficult and advanced stage of the process. To convert spoken into written language, is, to children who have never practised it, a difficult task, no matter how easy the passage, or how short and simple the words. The step from mere copy-writing to writing from dictation is too broad to be passed at once; it requires to be divided by some intermediate stepping stone. The most natural and obvious advance is the practice of transcribing words from a tablet or book, lying open before the child. Perhaps the very simplicity of this may be assigned as a reason why it is not generally practised; yet it is a most useful and improving exercise for children. It is one of the best methods of

teaching them to spell correctly; they learn how to manage capital letters, and to punctuate; it gives them a knowledge of the mechanical formation of sentences and paragraphs; and by practising it constantly, they gradually and surely attain facility and command in writing the language.

For those who are absolutely beginning, that is, for the children in the first class, the dictation lesson will scarcely differ from the writing lesson. The best way to commence is, to make them copy a few simple words, or even letters, in large hand from a black board. As soon as they are able to form and connect letters,—(which cannot be long, since they write a copy every day), they should copy the words of their own lesson off the tablet, which might be suspended before a whole draft. The second class children should continue the same process, transcribing day after day, either from their lesson books, or from a first class tablet, hung up before them. In this exercise they should, in all cases, write whatever hand—large, round, or small—they practise at the writing lesson. As soon as they begin to be able to copy with neatness and facility—when, for instance, they can fill one side of a slate twice in one half hour—they should be gradually introduced to the more advanced and difficult exercise of writing down what another person reads. They might be engaged at this on alternate days, the passages read for them being at first extremely simple. The higher classes should be chiefly occupied in writing from dictation, but they should frequently practise copying, especially on those days when the teacher is engaged with the junior division; during one half hour, they should be able, while writing carefully, to fill one side of the slate from three to five times. All boys of these classes, who can write a fair hand, should transcribe on paper; this is an extremely useful exercise, and should be frequently practised by the advanced classes.

The utility of this copying exercise depends, however, on one condition, namely, that the pupils exercise

moderate care both as to the writing and the spelling. The amount of improvement is in proportion to the general correctness of the copy; every error is worse than time lost, because it perpetuates incorrect spelling, and a habit of carelessness. From the very commencement, therefore, the teacher will see that a careful supervision be exercised over the children. The monitor, who is placed in charge of the junior division, must take care that they sit, hold the pencil, and shape the letters properly; and the senior division in like manner should write neatly and carefully. The teacher will also see that the pupils copy in all respects accurately; that they make all the stops, attend to the capital letters, form paragraphs properly, &c. As to the spelling, this depends entirely on their own attention; the books lie open before them, and there is, consequently, little excuse for mistakes. There will, however, be some errors, and the proper and best method of correction is that recommended in the next section. Those who are transcribing on paper should be obliged to execute the penmanship with as much care and cleanliness as in copy-writing, and the writing should be equally large, round, and plain. If this be not attended to, the exercise will be productive of at least as much injury as benefit. If a boy can copy a passage neatly, with facility and correctness, the teacher may be assured that he has advanced a most important step, not only in the art of writing the English language, but also in the acquisition of a habit of correct observation.

#### 5. WRITING FROM ANOTHER PERSON'S READING.

The next step after copying is "writing from dictation," properly so called. Children who have been trained in the manner described, will feel little difficulty in commencing this exercise, once they are able to write with moderate facility. But in the great majority of cases, because they have to encounter suddenly *this difficult task*, without any previous gradation, their

progress is excessively slow and laborious. The pupils of many national schools, with the exception perhaps of the highest class, are so utterly awkward and helpless in writing from dictation, that during a half hour lesson, they are usually able to write no more than what half fills one side of a slate, and even this with the greatest difficulty. A lesson attended by such a result, even though the spelling be moderately correct, may be regarded as a failure. If they have had previous practice at copying, even the least proficient will be able to fill a slate two or three times within the half hour. Those of the advanced classes who can write a fair hand, should generally use paper in writing from dictation. Pupils who have been for a long time constantly accustomed to write only on slates, commit errors with the greatest indifference, and acquire a habit of silly indecision, from the perfect facility of blotting out the wrong word, and substituting the right. On paper, the case is quite different; what is written remains; and the pupils are therefore obliged to decide at once on the correct form of the word, without the previous experiment of writing and erasing it, two or three times in succession.

The person who reads for the class should stand in front, and read a short clause at a time; he should read each clause once only, or at most twice, but with the greatest possible distinctness, and when he reads, all should listen. When he finds that all have written the clause last read, he calls for attention, and reads the next. The quality of the writing is a point seldom attended to; many teachers seem to think that if the spelling be correct, all is right. This is a great mistake; the teacher should insist, in all cases, that the writing be executed carefully and neatly—should be large, round, and plain; and the pupils should write with long and well-pointed pencils. They should leave a margin to the left of the page, and the words should not be crowded too closely even on the right. If there be not room on the right for the whole of a word, it must be properly divided *at the junction of two syllables*; the hyphen must

be placed in the proper position, and the latter part of the word written at the beginning of the next line, *not just over the first part*, as is often done. This little matter—the proper division of words—very seldom receives attention.

With respect to correction, the best general plan is this. The teacher, or whoever is in charge of the division, walks constantly among the pupils, glancing his eye over each slate as he passes: when he discovers a misspelled word, he causes the pupil to correct it at once, the wrong word being rubbed out (or crossed with the pen, if paper be used), and the correct word written in its place or above it. In this manner a teacher or an active monitor will be able to superintend a class of fifteen or twenty writers; and if he be diligent and watchful, scarcely a word will remain uncorrected in the end. It is hardly necessary to remark that the teacher should not employ himself in reading for the class, unless he can both read and correct at the same time, a task which is by no means difficult. But if he cannot do both, one of the boys should read while he is correcting. There are other methods of correction, all useful, which might also be occasionally practised. Ten minutes before the time is up, let the pupils exchange slates, and let each examine his neighbour's writing, marking the misspelled words. Or, without causing any interchange of slates, let the teacher or monitor in charge, standing in front of the class, spell every word in the whole passage, the pupils following him from word to word, and underlining the mistakes. At the end the misspelled words should be written correctly, in a column in a corner of the slate, and each boy should be called on to state the number of his errors. A passage written from dictation on one day should be repeated on the next, when, of course, the pupils should be expected to avoid the errors corrected at the preceding lesson.

To point out or draw a pencil across a misspelled word, without any further step, is generally a very resultless operation—the pupil will most probably repeat the very

same error next day. To render the correction effectual, you must not merely show him where he is wrong, but make him practise what is right. At the dictation lesson, therefore, bear this always in mind—the pupils should invariably write in a correct form, either during or after the lesson, all the words they have misspelled.

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## CHAPTER IV.

### ARITHMETIC.

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#### 1. INTRODUCTORY REMARKS.

ARITHMETIC is the fourth of those essential school branches, without a tolerable knowledge of which no person can be said to possess a good elementary education, and it may be considered equally important with the other three. So far as the arithmetical education of the pupils of our national schools is concerned, the matter to them beyond all others in importance is to become good practical calculators: for deficiency in this, no amount of arithmetical ingenuity or theoretical knowledge will compensate. The utility of their education in this respect is tested, not so much by any abstruse processes or ingenious puzzles, as by ordinary, simple calculation. The most difficult of all arithmetical operations, and consequently the severest test, is common addition. How very few there are, even of the best educated of our pupils, who can tot up correctly, at the first attempt, a column of pounds, shillings, and pence, consisting of fifteen or twenty addends! And the ability to accomplish this is of more importance than almost any other arithmetical acquirement; for common addition is more frequently encountered in mercantile life than any other kind of calculation. A good practical arithmetician then, let it be clearly understood, is one, first, who can perform mentally, with

readiness, and with little danger of error, all those innumerable short computations that are met with in every day life; and secondly, who can on slate or paper execute all sorts of elementary calculations, even when considerably extended, with rapidity and certainty.

In this respect it must be remarked, that both teachers and pupils very usually labour under a strange mistake. Operations in the simple and compound rules are commonly considered fit only for the junior classes; the advanced pupils think such simple work quite beneath them, and in most schools are never in fact specially engaged at it. They are always working in the advanced parts of the arithmetic, slowly and toilsomely, day after day, quarrying through the difficulties of "The Par of Exchange," "Compound Interest," "Alligation Alternate," &c. &c. It is very right that advanced pupils should know these; but to keep them always, or the principal part of their time engaged at them, is a mistake. The simple and compound rules are far the most important part of arithmetic, and the child who is well trained in them will find little difficulty in all the rest; it is merely a matter of a little study and explanation. Quickness and certainty in these is to be attained only by constant practice; the teacher should, therefore, make arrangements to have the pupils of all the classes exercised every day in simple calculations. Some suggestions on the best manner of putting this into practice shall be given in the course of the present chapter.

#### MENTAL ARITHMETIC.

##### 2. UTILITY; ELEMENTARY STAGES.

Mental arithmetic is as important as any other part of a child's arithmetical education: in all transactions involving number, facility, and certainty in common easy mental calculations, will be found perpetually useful. The generality of people very seldom use slates or paper, but there is no member of the community, down to the *very humblest* mechanic or labourer, that has not occa-

sion, almost every day of his life, to calculate mentally. Hardly any other literary acquirement is so often used, and this single fact is sufficient to show the great importance of directing special attention to it. Yet mental arithmetic is not often taught systematically in our schools. The fact is, teachers very generally labour under a misapprehension as to the meaning and application of the term. In the first place, it is generally only the most advanced classes who learn mental arithmetic at all. In the second place, it is commonly understood to mean merely a number of short rules (often called "short accounts"), which are usually found at the end of treatises on arithmetic; and whenever it is taught, it is almost universally confined to these, the pupils scarcely ever receiving a question for mental calculation that does not come under some short rule. But this is only a portion of mental arithmetic; the term has a wider signification, and means not only these technical rules, but all kinds of numerical combinations performed mentally, from common addition table up to the most complicated operations. The children should be made perfectly familiar with all the most useful contracted methods, and should be frequently exercised in them; but it is a great mistake to confine them exclusively to such rules. They should be accustomed to all kinds of easy mental computations, till by constant practice they acquire dexterity and power in grasping at numerical results—in combining numbers in every possible variety.

In the time-tables given in Chap. III., Part I., there is a certain number of lessons per week set apart for mental arithmetic for the junior division, and they learn it either in desks (as described in page 30) or in galleries. They should be placed in sections, each containing about two drafts, a teacher or monitor being placed over each section. For the very young children, mental arithmetic is nothing more than common tables. Those who are merely beginning, that is, those in the lowest section, should be first employed chiefly in count-



ing objects placed before them, such as the balls of an arithmeticon, or, if there be none, chalk-marks on a black board, marbles, &c. As soon as they are able to count up to 20 or 30, and also to count backwards, they should begin to add and subtract little numbers. The calculations should be at first extremely easy, and the numbers should refer to objects; thus, "How many are 4 apples and 2 apples?" "If a boy had five marbles, and found two others, how many would he then have?" "Five cows and three cows?" "After buying nine apples, a boy gave three to his companion; how many had he left?" &c. If a boy answer wrong, he should be made to correct himself by actually counting the balls or chalk marks. Thus, to the question, "4 eggs and 3 eggs?" suppose a child answers, "Eight eggs!" The teacher makes him first count out four balls to stand for four eggs; next he counts out three balls, and then he counts how many he has brought out altogether, when he will at once see his mistake. To make a child discover and rectify his own error, is a most valuable practice, and applies not only to the present subject, but to all school teaching. The children should also be practised in counting up and down, passing over every other number; thus a child repeats, 1, 3, 5, 7, &c., or 22, 20, 18, &c. As soon as possible the transition should be made from applicative to abstract numbers. The multiplication table should not be introduced at all at this early stage. The chief part of the time should be occupied in learning easy addition and subtraction tables, such as 4 and 3, 5 and 4, 8 and 5 and 2, 4 from 11, &c. At such little calculations the children should be exercised day after day, till they become so expert as to be able to perform them without hesitation. This result the teacher must not expect too soon; he must wait with patience, for expertness is to be attained only slowly, and after long practice.

The mental exercises of the next higher section (that is, of the next two drafts) of the junior division, will be *somewhat* more advanced. As soon as they can combine

single digits with facility, they should be exercised in adding and subtracting numbers not greater than nine, to and from numbers consisting of two digits; the use of the words *plus* and *minus* will be found very convenient at this and at all future stages. Thus 19 plus 9, 67 plus 5, 48 plus 7, 26 minus 8, 48 plus 5 plus 7 minus 6, &c. &c. Such exercises as these in plain addition and subtraction will afford a sufficiency of employment to these drafts, for it requires long and constant practice to be able to answer them without hesitation. They are just the exercises that children require most, to render them at a more advanced part of their course expert calculators. There is another recommendation which is by no means unimportant; they require such a small amount of teaching skill that any careful monitor can keep a class at work in this manner, almost as profitably as the teacher himself. Strangely enough, however, the young children of our national schools are very seldom systematically and continuously exercised in this way. It would seem as if the teachers thought it unnecessary, imagining that the children gradually acquire of themselves sufficient facility in these tables as they go along; and almost universally their first exercise in mental calculation is the multiplication table. But this is a great mistake, the consequences of which may be observed in almost any national school. You will find children working multiplication and division, and knowing the multiplication table, but who cannot tell the sum of 65 and 7 without a long pause, or perhaps counting on the fingers. Bear this, therefore, in mind; the boy who is not expert at addition table is every moment liable to commit an error in plain addition, the most necessary and universal of all arithmetical operations.

Another very useful exercise is ascending and descending by threes, fours, fives, &c., or in money by 1*d.*, 5*d.*, &c., according to the proficiency of the class. Thus you tell a child, "Begin at 7 and go up by fours,"

and he goes on, 7, 11, 15, 19, &c., till told to stop; or to begin at 60 and come down by sixes, or to begin at a shilling and go up by fourpence-halfpennies, &c. To such a class as this also the multiplication and pence tables should be introduced, and they should practise them till they become quite familiar with them. From the very commencement they should be exercised in money calculations, the difficulty being graduated according to the proficiency of the class. Of these, the greater part will be computation of prices; thus, the price of 11 arithmetics at 9*d.* each; of 5 caps at 3*s.* 6*d.*; the change to be received out of half a crown, after buying 4*lbs.* of sugar at 5*d.* a pound, &c. In all mental calculations, as well in this as in the more advanced classes, this rule should be observed: the children, while calculating, should not be allowed to mutter audibly, or even to move the lips or distort the face; and, above all, do not let them count on their fingers. There should be, in fact, no exterior manifestation of the interior intellectual exertion; the first thing heard should be the answer.

### 3. ADVANCED STAGES.

For the senior division, the first ten minutes of the (floor) arithmetic time every day should be devoted to mental arithmetic; or, if the teacher preferred, he might take the whole half hour on two days of the week. Those who are working short or long division should be quite familiar with all the exercises already mentioned—should be able to add a single digit to any number without the slightest hesitation, and should know perfectly the multiplication and pence tables. They should be exercised in adding larger numbers, as  $37 + 19$ ,  $48 + 26$ , &c. Combinations of more than two numbers should be presented to them, thus,  $39 + 11 + 5 = 8$ , &c. They should devote considerable time to practising division table; thus, 6 into 50—answer, 8 times and 2 over; how many nines in 76? &c. This, though very

necessary, is very seldom done, which is one of the reasons that children are usually found so slow and helpless in division, more so even than in the other simple rules. The time for mental arithmetic is also the proper time for exercising the classes that require it, in repeating tables of weights and measures; the children should be made familiar with all the common tables, for which a very small amount of time weekly will be sufficient. The best general way to practise is to let each child repeat one of the tables from beginning to end, exactly as it is given in the book; but they should also be frequently cross examined in them by such questions as, "How many ounces in a pound avoirdupois?" "How many feet in an English perch?" &c.

The mental arithmetic of the most advanced classes should be very varied in its character. It will be well if the teacher prepare each day's questions beforehand, writing them down in a note-book, with the answers all made out. Let the pupils be kept constantly at work, combining numbers in almost any way—adding, subtracting, multiplying, dividing. There is no difficulty in framing such questions as the following, and they are just as useful as any others:—Add 127 and 36; 365 and 122; subtract 57 from 1001; 19s. 7d. + £2 16s. 9½d.; how much is the sixth part of 46s. 6d.? 5 times 167? the amount of 93 fourpenny pieces? of 137 half crowns? the price of 39 books at 4½d. each? along with five half crowns, how many fourpenny pieces in a pound? How much money should you have, to give 1s. 3d. each to fifteen persons, and have 10½d. left? By how much does the product of 20½ and 4 exceed their sum? How many steps does a man take in a mile, if each step is 3 feet? &c. &c.

When they have become moderately expert in solving such questions as these, they should be made acquainted with the more useful short rules. The following are easily remembered, really useful, and frequently required:—(1). The dozen rule; (2). the score rule;

(3). the gross rule; (4). the rule for 100 articles; (5). the two rules for yearly wages at so much per day; (6). the hundred weight rule; (7). to find the price of a number of articles at an even number of shillings each; (8). to find the interest of any sum for a number of months at 5 per cent. per annum; (9). the rule also at 6 per cent. The pupils should be encouraged to invent short methods for themselves; and, besides the above rules, the teacher may point out others that may be used with advantage. Take care that when the pupils have begun to calculate by these rules, too much of the mental arithmetic time be not given up to them; let them merely get their turn among all the other multifarious kinds of calculation already noticed.

There are several ways of receiving answers from the pupils during a mental arithmetic lesson. Let the teacher put the question, and let every child who can answer hold out his hand; the teacher then takes the answers of four or five before giving the final decision. Or perhaps a better way: the boys hold their slates in their left hands; the teacher puts the question, and after waiting a reasonable time gives the word, "Down!" when all instantly write down the answers (previously calculated), and show the slates. The teacher glances at each, and determines those that are right. This method has the advantage of showing all the successful answerers.

Take care that *all* be at work: some lazy boys will not work at all if they can manage to escape the teacher's notice. Be careful also not to receive all the answers from two or three quick boys—*crack* calculators—at the head, a very general and pernicious error, as well as a gross injustice to the majority of the class. The teacher must pour forth his questions without delay or hesitation, a matter of very easy accomplishment, even for a monitor, especially if the questions be prepared beforehand. Get through as many questions as possible within the time; *the profit of the lesson is directly proportional*

*to the number of questions that have been answered correctly by each pupil.*

## SLATE ARITHMETIC.

### 4. ELEMENTARY STAGES.

From the very commencement, the children should be accustomed to the use of slates; this training should begin even with the lowest draft of the first class. At the floor arithmetic lesson every day, these young children should stand with slates in their hands, at the circles round the black boards, like the more advanced classes, to receive exercises from dictation. Two drafts of the junior division may generally be joined round each black board. The exercises of the lowest two drafts must of course be extremely simple. They must first learn to distinguish the single digits, which is best done in connexion with actual counting of objects. The teacher, for example, gets a child to count six balls, or chalk marks, and immediately writes down the digit 6 on the board, telling the children that it stands for six, &c. After they have become acquainted with the single digits, they should then be accustomed to read numbers of two digits, which is best accomplished in this way. The teacher fills the black board with a variety of numbers—or, still better, they may be written permanently on a sheet;—pointing to each number, he exercises the children in turn in reading them off. As soon as they know the digits, they must learn to make them; there is a desk lesson for this special purpose, which will be noticed presently. They should be shown how to work little exercises in addition on the black board; and when they are able to go through them, they should begin to work them on their slates, taking them down from dictation. The exercises should in the beginning be all applicate, and the addends at this early stage should not exceed two digits; thus, “How many sheep in four flocks, one containing 17 sheep, another 13, the third 9, and the fourth, 29?”

The children of the highest draft of first class, and of the lowest draft of second, should be able to write down with facility numbers of two, three, or four digits, and to work exercises like the one just given, and still more difficult. They should also be able to work easy slate exercises in subtraction, and multiplication, when the multiplier does not exceed 3 or 4. In adding and multiplying, the numbers to be "carried" should always be *remembered*; the pupils should not be allowed, as they commonly are, to put them down on the slate. After having given any applicable question, as suppose, "There are 37 boys in the school; if each have three marbles, how many marbles in the school altogether?" The teacher should generally ask, "How is this question to be done?"—Answer, "By multiplying 37 by 3." This is an extremely useful exercise. After they have gone through the work, he should also ask, "Well, how many marbles altogether?" When some pupil to whom he points reads out the answer. The exercises should, in general, consist of numbers not larger than the children are able to put down from dictation.

There is yet one kind of exercise, which should be frequently practised, not only by the children of these low classes, but also by those of the higher, the difficulty being graduated according to the proficiency of the pupils. The teacher writes on the black board several columns of single digits, as in the margin; or, what is far better, sheets like those described in the sixth section of this chapter may be filled with columns of various lengths, and kept permanently for this purpose. The board or sheet is hung opposite the class, and each pupil runs up one column, adding the digits as he goes along, and repeating aloud the different sums only, but not the digits, as is commonly done:—thus, in adding the first column, he repeats the numbers, 9, 18, 26, 34, 41, 47, 49, 57, 66. The rest of the pupils look on, and

4	8	6	9
5	9	7	8
7	3	8	2
1	8	5	6
3	9	8	7
5	7	9	8
6	3	6	8
2	5	8	9
7	8	6	7
5	8	9	2

put out their hands, the moment they observe him wrong; the correctness of each computation is tested by adding downwards. This is a difficult exercise for beginners; they are at first slow and helpless, but they gradually acquire facility. A pupil who has long practised it, will be able to run up a line of 30 or 40 digits with the greatest readiness, and with little danger of error. Its use is to facilitate common addition, for which it forms the best possible preparation. Any careful monitor will be able to conduct this exercise, if the teacher cannot be present.

It has been thought expedient to be minute in describing the method of carrying on the black board teaching of the first and second class children, because in many national schools they are seldom taught arithmetic systematically, except only so far as is necessary to comply with the requirements of the programme.

#### 5. ADVANCED STAGES.

It will not be necessary to describe in detail the kinds of exercises that should be given to each of the higher classes at the black board lesson; the programme to some extent regulates that. But a few general directions shall be given. The exercises should be always taken down by the pupil from the dictation of the teacher, or whoever is in charge of the class. Many teachers write them down in the first instance on the black board, and the pupils merely copy them on their slates and work them; but this should never be done, unless for some special reason. When a boy has finished the work, he drops his slate by his side, holding it in the left hand, and after this he should not be allowed to raise it to his eyes again, or make any alterations. When the teacher sees that all or nearly all have finished, he gives the order "Show slates!" when each boy instantly holds up the slate in front of his breast, with the exercise turned towards the teacher, the slate being still held only with the left hand. If there be some wrong, the teacher, after having first given the order "Slates down!" goes him-



self through the work on the board, explaining the process, and interrogating the pupils to whatever extent he may deem necessary. The pupils should, of course, cease from work, and pay attention while he is working and explaining. The black board is the great instrument for explaining rules, and teaching the children to work out examples in accordance with them, and the teacher should largely avail himself of it for these purposes.

What is called in some localities "setting sums" is a practice much resorted to by unskilled teachers. The teacher *writes down on the slate for the pupil* an exercise in addition, multiplication, &c.; the pupil goes to his place to work, and when he has it finished, he brings it up for inspection. The teacher is often for a considerable time every day engaged in this manner, writing down and inspecting exercises. This, though very general, is an extremely unskilful and worthless way of employing children. Every exercise worked on a slate by a child should be written down by himself, either from dictation as already described, or from a black board or a book, as noticed further on.

All the pupils should, of course be perfectly familiar with notation and numeration, as far as they are taught to each class. We do not think it necessary to enter into detail on this part of the subject; but with respect to notation, there is one suggestion too important to be omitted. The pupils should always supply the points of separation as they put down the digits; that is, after a child has written the millions, he at once marks the point; the same after the thousands, after which he writes down the three units' places. The common way is to put down the entire number first, and then turn back and point it. The pupil who follows the plan here recommended will seldom commit an error in notation.

The neatness of the slate work is a matter which commonly receives very little attention; the teacher is generally satisfied if he see the correct answer, though the

slate may be soiled, the figures deformed, the lines oblique, and the whole operation illegible. A child attempts to put down a number of addends, and instead of having the columns perpendicular, they almost invariably form lines oblique to the left, so as frequently to run out at the side of the slate and spoil the whole operation. And there are other faults of this kind, which the following directions, if carried out, will remedy. The slate should be well cleaned; the figures should be neatly formed, and they should be in *perpendicular* columns and *horizontal* lines. If a child want to draw a separating line under a few figures, he should not draw a curve across the entire slate; he should merely draw a *straight* line, parallel to the top of the slate, not longer than the line of figures, and nearly touching them. The answer should always be written very distinctly, so as at once to catch the eye; and the denominations, when necessary, should be written over the figures.

#### 6. COMPETITIVE WORK.

The attainment of rapidity and accuracy in long computations in the simple and compound rules is the point of greatest importance to the pupils, and to which, therefore, the teacher should direct his most earnest and undivided attention. It is not a matter easy of accomplishment, it is not the work of a short time; it requires long and constant practice. Understand clearly that the improvement of the pupils in practical calculation within any given time—a month, a day, or during one lesson—depends mainly on the number of exercises they work, either correctly or with a small number of mistakes. In all lessons, therefore, devoted to practical slate arithmetic, let the pupils be kept uninterruptedly at work; let as many exercises as possible be crowded into the time; and while exercising a proper degree of caution in avoiding mistakes, every possible inducement should be held forth to stimulate them to rapidity in working. There is no plan better calculated to effect

these objects, more effectual in rendering the pupils quick and correct calculators, than that of accustoming them to work competitively against each other.

The simplest and easiest way for the teacher to put this into practice, is to place the pupils who are to compete, round him in a circle. He then dictates an exercise, which all instantly put down and work; as soon as each has finished, he drops his slate by his side, holding it in his left hand. When the teacher observes that all, or nearly all are done, he gives the order, "Show slates!" which must be instantly obeyed by every one in the class, whether he has finished or not. He then passes quickly round, and marks the slates of all who are right. *In all exercises in simple calculations for the pupils of the advanced classes, no boy should ever be allowed to make a second attempt;* this rule, if strictly enforced, will train them to caution and correctness. In this exercise, the black board is not supposed to be made use of, since there are no rules to be illustrated or processes explained. The pupils simply work exercise after exercise, each making one attempt and no more; and in the end, the marks are reckoned up, and if necessary, the pupils placed in class according to merit. Addition exercises, both simple and compound, should predominate over every other kind; but they should be sufficiently short to enable the pupils to work them quickly—each containing for example from six to ten addends according to the proficiency of the class. The success of all this depends entirely on the life the teacher infuses into the class—that generous, hearty spirit of emulation, that renders this severe intellectual exercise a real amusement.

The following arrangement is very convenient for carrying on competitive work, and it lies within the reach of every teacher, being neither expensive nor difficult to adopt. On a moderately large sheet or card, say 24 inches by 18, a number of exercises—as many as the card will contain—are written. The figures, which *must be sufficiently large and plain to be seen by a whole*

class, when the card is hung in the centre, may be written either with a pen, or with a piece of cane, pointed like a pencil, and dipped in ink. The exercises are numbered, and the answers (also numbered) are all written out on the page of a little book. This card is hung in the centre of a class, within view of all the pupils, and the teacher or monitor stands within the circle, with the answers in his hand. For the purpose of marking the results, he has a slate, down the middle of which, in a vertical column, are written the names of all the pupils in the class; or, better still, let them be numbered from the top, and their numbers written instead of their names. The pupils all commence to work at the same moment, and at the same exercise; in every case they copy the exercises on their slates, and all compete for the honour of working the greatest number within the given time. When a pupil has finished an exercise, he shows it to the monitor or teacher, who, consulting his table of answers, pronounces the word, "Right!" or "Wrong!"

MARKING SLATE.		
Wrong.		Right.
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	

If he be right, the monitor places a mark to the right of his name or number on the marking slate; if wrong, the mark goes to the left, the monitor in no case giving any information as to where the error lies; in the former case the boy at once commences the next exercise, in the latter he goes over his work again, to discover his error, and set himself right. No boy is

allowed to pass over an exercise till he brings out the answer; and no matter how often he shows it up wrong, he is marked on the left each time. When the time has expired, all cease at the same moment at a given signal. In summing up the amount of each boy's work, every mark on the left cancels a mark on the right; or if the exercises be very difficult or the pupils slow, one mark on the right is erased for every two, three, or four on the left, according as the teacher directs.

The effects of this arrangement may be easily anticipated: the pupils have the strongest inducements to exertion, both as to expedition and accuracy. Rapidity is useless without correctness; a child may succeed in working a considerable number of exercises, and yet may bring only a small number of marks, if he make a great many mistakes. There is scarcely any other method that gives such a quantity of individual practice as this; it is constantly practised in the Central Model Schools, and it is most interesting to witness the spirit with which the pupils of a whole class dash at the first exercise, the moment they get the word to begin, and the persistent effort maintained during the whole time.

There should be a great variety of cards; for when they are few, the pupils begin to know the answers off by rote. The exercises on a single card should all be of the same kind, and about the same in length and difficulty. There should be several with addition exercises, both simple and compound, of different degrees of length to suit the different classes, from five or six addends, up to twelve or fifteen. There should be exercises on all the simple and compound rules, in reduction, in proportion, in practice, in interest, &c. &c.

Old arithmetical or spelling tablets form a very good material for the cards, renewed by pasting on both sides clean sheets from a large copy-book. Each sheet or card should contain from twenty to thirty exercises according to their length.

Once the children come to be able to work the *simple rules with moderate facility*, they should commence

this competitive work. The exercises should be so easy in relation to the class, that a considerable number may be worked within one half hour. If they be too long or difficult, the work goes on slowly, and the children lose all spirit and animation. The work may be occasionally varied by placing two classes opposite the same card to contend against each other; this, when properly managed, never fails to create a great amount of healthful emulation.

### 7. DESK ARITHMETIC.

In the time-tables of Chap. III., Part I., each division has got one desk lesson each day on arithmetic: a few suggestions shall now be given on the management of this. For very young children—mere beginners—the proper employment during this time is learning to write figures. A black board is hung before them, with a line of figures neatly chalked on it; these they copy on their slates, filling up line after line, the monitor adopting the same precautions as to position, hold of pencil, and formation of figures, as at the writing lesson. For those a little more advanced, who are able to work easy sums, a variety of exercises can be devised. One of the most obvious is copying down short sums in addition, &c., which have been chalked by the monitor on the black board. Or let them fill their slates with numbers, every one of which is greater or less than the one preceding, by a common difference; this exercise must be graduated in difficulty to suit the class. Thus, if they are told to commence at 4 and go up by threes, they write, 4, 7, 10, 13, &c., or to commence at 200 and come down by sixes—200, 194, 188, &c., or for a more advanced class, to commence at £20 and come down by 1s. 3½d., &c. &c. This will always be found an excellent exercise for young children. See that they make the figures neatly, and that they separate each number from those before and after, by a distinct but not too broad an interval. Writing down tables of weights and measures,

the multiplication table, &c., is also a very useful exercise.

But for those who can work even simple addition with any degree of facility, as well as for all who are farther advanced, the best general employment is working exercises from the books; and for this purpose *every pupil should be furnished with an arithmetic of his own*.\* Each works independently of all others, and where he ends to-day, he commences to-morrow, thus advancing through the book as far as he is able to go. When a child has finished an exercise, he holds up his hand as a signal, and the teacher or monitor in charge glances at the slate, and pronounces the work right or wrong. The business of the person in charge is threefold: first, seeing that all the little students are constantly at work; secondly, examining the exercises when finished; and, thirdly, assisting those who need it. It is not every pupil who fails in bringing out his answer that needs help; to understand this, observe that in working arithmetical exercises, pupils are liable to fall into two kinds of errors, errors of principle and errors of calculation. If a child be ignorant of the proper *method* of working out

\* The utility of this silent work has been questioned, but we think without sufficient reason; we consider it not only useful, but absolutely necessary. We beg to quote the following opinion, which bears directly, and conclusively, on this point:—

“I had often reason to complain that due time was not allowed by the arrangements of the *time-table* for working at the desks questions in arithmetic, since this silent practice is absolutely indispensable in order to produce expert and accurate calculators. In order to make palpable to teachers the evil consequences arising from a neglect of it, I occasionally brought forward pupils who, though learning the advanced rules of commercial arithmetic, had to make repeated attempts to work out with accuracy an easy example in practice. This, though not of frequent occurrence, should be studiously guarded against. In the hedge schools, the advanced boys used to devote their whole time to writing and practical arithmetic; and hence it happened, that, though ignorant of other important branches, they invariably turned out good clerks, owing to their proficiency in writing, and their cleverness at computation.”—General Report of Timothy Sheahan, Esq., A. M., T. C. D., Head Inspector: 1859.

a question, he generally needs assistance; the monitor in this case should show him the right way, and then let him work it out for himself. But if he know the right method, and go wrong in the calculation, in this case he needs no assistance at all; he should be made to help himself. Difficulties of the former kind seldom occur; in nine cases out of ten, when a child fails, it arises from an error of calculation. If the pupils be allowed to have their own way, they will call often enough for assistance. Many teachers act most injudiciously by looking over a wrong calculation, to discover and point out to the pupil the exact place where he went wrong; and some even go so far as to take the slate in their own hands, and perform the entire work from the beginning, while the pupil looks on! All this is very injurious, for it tends directly to destroy the pupil's sense of self-reliance. The children should be encouraged to face their difficulties, and to exert themselves manfully in overcoming them. It is always sad to see a pupil whose heart quails at the sight of every trifling obstacle—who wants resolution to return again on his work, and endeavour to set himself right. The success of the boy in the struggle of after life, depends in no small degree on the manner in which he has been trained in his school days, to look without terror on difficulties, and to encounter and overcome them, with courage, patience, and determination.

All our time-tables afford two lessons on arithmetic every day, one at the circles before the black boards, the other in the desks from books; this arrangement combines the advantages of both methods of teaching the subject, and at the same time counteracts their respective disadvantages.

### 8. THEORETICAL ARITHMETIC.

Not many years ago it was a universal cause of complaint that arithmetic was taught too mechanically; that with the finest opportunity, the minds of the children were never exercised in understanding the reasons



of the rules and processes. The same complaint is still not unfrequently heard, and is often justified by the dry, dull, uninteresting way in which the children are doomed to learn this important branch.

To a moderate extent, and as far as the pupils are able to profit by and understand them, the different rules and processes should be explained. The nature of our system of notation, the reason of "carrying" in addition, subtraction, and multiplication; the reason of multiplying the second and third, and dividing by the first in proportion; the meaning of the different multiplications, divisions, and taking of parts in practice; the nature of fractions, &c. &c.; these, and many other matters, should in due time be explained to the pupils.

But take care not to begin too early, or attempt too much. Many teachers of the present day have a tendency to go too far in the way of theory; their children are perpetually perplexed with reasoning; all their arithmetic lessons are mere talk, obscuring rather than elucidating, and leaving nothing behind; while practical arithmetic is comparatively neglected. What shall be said of a boy, who has been apparently taught the reasons of all the ordinary processes, but who cannot, without repeated blunders, add a short column of pounds, shillings, and pence, or work a common question in practice? And what estimate shall be formed of the teacher's common sense, who persists in giving long explanations of "carrying one" in subtraction, of the decimal system, of the reason of the successive steps in multiplication, &c. &c., to children who cannot tell you the sum of 25 and 8 without counting on their fingers! As for the assertion that a pupil must never learn any rule or operation without fully understanding the reason of it, this is the dream of a mere theorist in the science of school teaching. Can any one for a moment suppose that a child of eight or nine is capable of comprehending the reason of the process in long division, or of numerous other operations of a similar kind? The attempt to make children understand the reason of every

arithmetical process they are called on to perform, is absurd, like every other attempt to accomplish a manifest impossibility. It is mischievous in its consequences; for besides puzzling, perplexing, and wearying the child to no purpose, it wastes the valuable time that might be profitably employed in exercising him in simple, practical, and useful calculations. Teach principles and reasons as far as your own time and the intelligence of the children will permit, *but at any rate make them good calculators*. The teacher who accomplishes this has done his duty, even though his pupils be only imperfectly acquainted with what is called the *rationale* of the different processes.

Generally speaking, with the exception of the very easiest and simplest principles, the demonstrative parts of arithmetic should be deferred till the children are far advanced. From an early period, however, they should be made familiar with, and should constantly use, the technical terms belonging to the different rules, such as addend, sum, factor, minuend, quotient, &c. They should be accustomed to define and explain these terms, and to state verbally the mode of procedure in the different rules. The teacher will take care that these definitions and explanations be sufficiently simple for the children of the different classes; and he will make himself sure, by constant interrogation, that they clearly understand them.

## CHAPTER V.

## GEOGRAPHY; GRAMMAR; HOME LESSONS.

## GEOGRAPHY.

## 1. MAP TEACHING.

A VERY unskilful method of teaching geography is still practised by a large section of our national teachers; of this any one can satisfy himself either by actually visiting the schools, or by glancing through the reports of our inspectors. The geography lessons are generally without plan—scattered, unconnected, and hap-hazard. The teacher, with a pointer in hand, and a map before him, questions on every conceivable subject, according as the different parts of the map happen to catch his eye; and mountains, lakes, towns, islands, rivers, &c., are jumbled together without the least attempt at arrangement.

A geography lesson should be always taught before a map; whenever a place is named, it should be pointed out by one of the children; as a general rule the pointer should be in the hands, not of the teacher, but of the pupils. The different parts of a map should be taught connectedly; all the rivers should be taken together; all the islands, lakes, mountain chains, &c., in the same manner. Unless expressly for the purpose of examination, the teacher must not question promiscuously all over the map. Each lesson should be confined to some one or more special portions; thus, the subject of one lesson might be the rivers of the country or continent under consideration. The pupils should, in the first instance, be exercised in pointing them out, *following the order given in the Geography*. It is a bad plan to call forward one child to point out "The Shan-non," the next to show "The Barrow," the next "The

Blackwater," &c.; each child should go through the whole series before giving the pointer to another; and the teacher must not rest satisfied until each can, without assistance, name them all in the proper order, and point them out as he names them. He must take care not to weary the children by keeping them too long at any one exercise. For example, after they have been engaged ten minutes or so in pointing out the rivers, he might introduce some useful or interesting information naturally connected with them; as the mountains, marshes, or lakes in which they rise, the bays, &c., into which they empty themselves, the countries through which they flow, the important towns built on them, the distance to which they are navigable, the scenery along their banks, &c. The mountains, the lakes, the seas, the bays, &c., should be treated in the same manner as the rivers, the teacher taking care never to mingle them promiscuously, unless where there is some obvious natural connexion, and, as a general rule, following the order given in the text book.

As the mountains of a country determine its rivers, both should be as far as possible connected; the pupils should be accustomed to name the principal rivers rising in each mountain chain, and the directions in which they flow. The towns and other remarkable places on the principal rivers, especially those of the British Islands and of Europe, form admirable materials for teaching; the pupils should be frequently exercised in sailing or travelling in imagination along the course of each, beginning at the mouth, and naming the towns and places of note they pass, with the remarkable or interesting circumstances connected with each. In the commencement they should always have the aid of the map at this exercise, but the more advanced should ultimately be able to name the principal places, and give their relative positions, without looking on it. The map should be constantly referred to, however, to correct all mistakes. While the Board's large maps should be in general use, every school should be furnished with a few of *Bates's*

small blank maps. These are excellent in their way, and should be very frequently used, after the pupils have become moderately familiar with the outlines of the large maps.

With respect to the order in which the different parts of the geography of a country are taught, the safest as well as the most convenient guide to follow is the text book. Thus, for Asia, the order as given in the small Geography is:—General description, boundaries, position, dimensions, area, divisions with their chief towns; seas, gulfs, bays, and straits; islands, peninsulas, capes; mountains, rivers, and lakes.

The home lessons, if properly managed, will be a most useful auxiliary in teaching geography. The children learn at home to repeat by rote, in the order given in the book, the towns, mountains, lakes, &c.; and the school lesson frequently consists of a repetition of the same portions, with the additional exercise of pointing them out on the map. The teacher's task, therefore, will be rendered comparatively easy, if the pupils have, in the first instance, learned to name them without hesitation in their proper order.

## 2. GEOGRAPHY OF THE BRITISH ISLANDS.

It would appear scarcely necessary to remind the teacher, that the pupils should know the geography of the British Islands, and that of Europe, better than that of any other country or continent whatever. It is strange, though not very uncommon, to find a class of children acquainted with the most minute features of the map of the world or of Asia, and yet ignorant of the course of the Shannon or the Severn. All classes down to the second ought to learn the map of Ireland, and the higher classes should be perfectly familiar with it; they should be acquainted, not only with the general view as given in the small Geography, but also with the more *extended* information contained in the "Geography Gene-

ralized." The advanced classes should, in like manner, be made acquainted with the general view of England and Scotland, should know the great centres of manufacture, &c., as well as many other remarkable and interesting features, of which the "Geography Generalized" affords full information.

The etymology of proper names forms an interesting branch of the geography of the British Islands. In England there are Celtic, Roman, Anglo-Saxon, Danish, and Norman-French names; in Ireland, the names are nearly all Celtic, and, generally speaking, those that are not, are comparatively modern. To trace the names of the principal places to their origin is always attractive to children, and is, at the same time, both an entertaining and instructive exercise. This is a portion of the geography of the British Islands, therefore, that the teacher should by no means neglect. There is a good deal of information on the subject in the "Celtic and Anglo-Saxon roots" of "The Spelling Book Superseded;" but the teacher will find much more, condensed into a small compass, in the "Geographical Etymologies" of "The Dictionary of Derivations."

Though geography is an interesting subject, and should be taught in every elementary school, the teacher must remember that it is very subordinate in importance to reading, writing, and arithmetic. He will therefore in the first place, take care not to bestow too much time on it; in the second place, he must avoid minuteness or excessive detail; with the exception of the Geography of the British Islands, general views and leading principles are all that the pupils require, and to these the teacher should strictly confine them.

For some valuable practical suggestions on this subject, the teacher should read attentively the "Preparatory questions for young beginners" in the small text book, and the "Method of teaching geography" in the "Geography Generalized." We have not thought it necessary to speak of mathematical and physical geography, as all necessary information both on these

two portions of the present subject, and on the method of teaching them, is to be found in the book last named.

### GRAMMAR.

#### 3. GUESSING ANSWERS; DERIVATIONS.

We do not think it necessary to enter into any details regarding the method of teaching this subject, as it has been very fully developed in Dr. Sullivan's Grammar. The teacher is recommended to study carefully the "Observations on the method of teaching English Grammar" at the beginning of the book, and the articles on "Parsing," "Analysis of Sentences," and "Idioms and difficult phrases" at the end of Syntax.

Of all the ordinary subjects of the school programme, grammar is the most difficult to be properly taught. In the others, there is generally something to catch the eye, something on which the mind of the child may rest; but in grammar, it is all pure mental work from the commencement. This is the reason that in this subject, the children are so much inclined to guess; they resort to this easy and ready expedient rather than undergo the labour of thinking. If it be carelessly or unskilfully taught, therefore, so far from being a useful intellectual exercise, it may be and often is, in fact, productive of more injury than benefit. This habit of guessing is easily acquired and difficult to eradicate; and if it be fostered in one subject, it will be imported more or less into all the others. To guard against this tendency, the teacher is recommended to call on the children continually for the reasons of their answers. And he should not rest content merely with the repetition of a grammatical rule or definition; he should satisfy himself that the pupil fully understands his answer, by causing him to explain himself in his own words as well as in those of the text book.

Derivations, prefixes and affixes, &c., form part of the *grammar of the language*; they ought to be introduced,

therefore, at the time of the grammar lesson. After each pupil has parsed a sentence, let the teacher question the class on the derivation of all those words that contain roots which the pupils should know. Or, if the teacher prefer, let him devote a portion of the grammar time exclusively to this portion of the subject. English etymologies should be taught before, or at least contemporaneously with Latin and Greek roots, because they are in themselves extremely important, as well as very easy and interesting. We recommend the teacher, therefore, to make himself perfectly master of these, as they are given in "The Spelling Book Superseded," and to make the pupils of the fourth and fifth classes also thoroughly acquainted with them.

#### HOME LESSONS.

##### 4. NECESSITY AND USE.

To develop the understanding and to cultivate the memory of the pupils—these, so far as intellectual training is concerned, are two of the principal tasks the teacher has before him. Each demands an equal share of attention; the teacher is equally in fault, who accustoms his pupils either to understand without remembering, or to remember what they do not understand. This latter fault was formerly very prevalent; the practice of committing to memory whole volumes of spelling, grammar, geography, history, &c., was carried to a most absurd excess. The evil has not yet quite disappeared, as any one may prove to his own satisfaction, by inspecting the "tasks" in some of our public and private schools. But perhaps teachers of the present day are prone rather to the other extreme. This remark applies to many even among the best of our national teachers: we sometimes neglect the cultivation of the memory, in the attempt to impart the whole mass of school knowledge by direct teaching.

There are some who, with the idea of removing all



unpleasant difficulties from the child's path, would altogether discard such an institution as home lessons, or "tasks;" but this is at best a mistaken kind of benevolence. The path of learning can never be smooth; it may be pleasant, but it is always more or less difficult and laborious. No one ever yet learned anything worth the name of learning, without labour and application; whoever attempts to convert learning into an amusement—a kind of sugar-plum affair—attempts an impossible task, and does more harm than good. The teacher's grand object should be, not so much to remove difficulties, as to train the child to overcome them; to teach him to love labour rather than avoid it. He should never lose sight of the important principle, that the more a child can be got to do for himself, the better, and he should foster the process of self-learning by every means in his power.

The assertion that a child must never get anything by rote is equally erroneous. Committing to memory is necessary not only for children, but for all people as long as they continue to be students; of this every one has sufficient experience who commences to learn a new science or a new language. There is a vast amount of elementary knowledge, that must necessarily be learned by rote, such for example as arithmetical tables, chief towns of countries, grammatical definitions, &c. It is surely a very valuable acquisition for a child to be able to repeat by rote, without hesitation, the tables of avoirdupois weight or long measure, the seas of Europe, the chief towns of Lancashire or of Down, lists and definitions of the different kinds of pronouns, and a thousand other matters of a similar kind. In every school, then, the pupils should be required to prepare lessons at home, in the first place to supplement the daily instructions, and thereby accelerate their own progress; and, in the second place, to cultivate their memory and to train them to intellectual labour. But while the teacher insists that the children commit to memory *certain elementary* portions of their text books, peculiarly

fitted for such kind of learning, he will be careful not to overwork them with long and difficult tasks; and, above all, he will never require them to get off anything by rote, that they do not thoroughly understand.

To subject the children to the labour of self-study to such an extent, that they come every morning prepared for examination in a certain number of lessons, is one of the most difficult tasks the teacher has to encounter; it requires a considerable amount of training, but when accomplished, it may be regarded as the triumph of discipline, an infallible proof that the teacher has acquired complete influence over his pupils. The schools, however, in which the teachers have succeeded thus far are not numerous. The word "Home-Lessons" appears on most time-tables, but in many schools it is the name without the reality; every morning there is the form of examination, but it is a mere fiction. In numerous cases the children, in fact, never look at their lessons at all; they have probably a kind of imperfect knowledge of the subject already, from having gone over it before, and they depend partly on this, and partly on chance, to get them through the ordeal of examination. You may prove this by questioning them; and so far from having prepared the lessons, with great probability you will find that many of them are even ignorant of what or where the lessons are. This state of things is attributable partly to the fact, that the teachers do not attach sufficient importance to the home lessons, and are consequently indifferent about the manner in which the pupils prepare them; and partly to the prevalence of a loose, inexact, imperfect method of examination, that allows idle, unprepared children to escape with comparative impunity.

## 5. MATERIALS.

The home lessons should begin with the second class children. The lessons for these will be extremely sim-

ple, a mere preparation for higher work, but still they should be exacted with strict scrutiny; tables, spelling, and simple poetic pieces, will form the best materials. Let them be required to prepare every day *a small portion* of the multiplication table, or one of the easier tables of weights and measures; each child should be examined by requiring him to repeat it from beginning to end, without interruption. They are not supposed to use "The Spelling Book Superseded;" let them come every day prepared to spell *all* the words in the first two or three sentences of their reading lesson; this is the very best spelling lesson they can get. The children of sequel class should prepare lessons in the Spelling Book, and the "Introduction to Geography and History;" they should also have a short lesson in extended multiplication table, or in tables of weights and measures. Prepared lessons in tables should terminate with sequel class; all the higher classes should know them so well as to render home study unnecessary. The pupils of third class should have lessons in Dr. Sullivan's Grammar, the Spelling Book, and the small Geography; and those of fourth and fifth class should have, besides, lessons in Latin, Greek, English, Saxon or Celtic derivations, as given in the Grammar and the Spelling Book.

The most useful parts of the geography for home lessons are chief towns. The principal towns of Europe, Asia, Africa, America, and Ireland, will afford sufficient materials for sequel class, and to these the pupils may be wholly confined. For third class the lessons should include, besides those for the sequel, the chief towns of all the counties in the British Islands. The fourth and fifth class pupils, and, if the teacher think necessary, the more advanced of the third, may prepare lessons in a more extended course, but the teacher must take care to confine them to those portions of the book which it is useful to be able to repeat by rote. The best materials are the general views of the continents and of the *British Islands*, as given in the small Geography, such, for

instance, as "The principal islands of Europe," "The principal seas of Asia," &c. (For more on this subject, see method of teaching geography.)

In "The Spelling Book Superseded," the sequel pupils should be confined to "Class First" of "Verbal distinctions," and those of third to the first three classes. "Class Fifth" of "Verbal distinctions," the "Celtic and Anglo-Saxon roots," and the "English Etymologies," afford admirable materials for the home lessons of the advanced pupils. These three parts, especially the two latter, do not receive that amount of attention they deserve; the teachers will do well to study them carefully themselves; and the pupils of the fourth and fifth classes should constantly prepare lessons in them, till they know them perfectly. The home lessons in Latin and Greek roots may be got either from the Fourth Book, the Spelling Book, or the Grammar.

In the Grammar, the pupils of third class should be confined altogether to the large type, as far as the end of Etymology. Those of fourth and fifth should get the large type to the end of Syntax, and any portions of the smaller type that may strike the teacher as particularly useful to be known by rote.

The children of all the classes, from second upwards, inclusive, should be occasionally required to commit little poetic pieces from their respective class books; this need not be every day; once or twice a week will be sufficient. In examining a lesson of this kind, the pupils should be obliged to repeat the piece deliberately, correctly, and tastefully.

We have considered it expedient to give this short sketch of the materials for those home lessons that are usually called "tasks;" that is, those portions of the different books that it is useful and necessary for the pupils to know by rote. In this matter many teachers commit grave mistakes, through want either of judgment or reflection, by obliging the children to commit indiscriminately almost every part of their text books. This is more especially the case with grammar; in many schools

the pupils are condemned to the forbidding drudgery of getting by heart all the small type, even to the longest and most minute rules and exceptions. This is an impossible task, for no pupil's memory will retain them; and even if it were possible, it would be useless. Far the greater portions of these books are not intended to be committed to memory at all, but merely to be read carefully by the pupils, and explained by the teacher.

Exercises prepared on paper form another kind of home work, at least as useful as any of the preceding. There may be paper exercises in connexion with almost any of the subjects taught in the school. It will not be necessary to specify these in detail, but there are two kinds that deserve particular mention, viz., the transcription on paper of portions of the ordinary reading lessons, and the solution of arithmetical questions. For these exercises, each pupil should be provided with a little note-book, made from a small copy-book; they should be required to keep them cleanly and neatly, and quite clear from scribbling. For an exercise of the first kind, they might be required to bring, carefully transcribed, a small portion—suppose half a page—of their reading lesson; for one of the second kind, they should bring, fully worked out, the solution of three or four arithmetical questions, the number, length, and difficulty of which must be regulated of course by the proficiency of the class. The merit of each exercise is to be judged by the excellence of the writing, the correctness of the spelling and punctuation, or of the work, if it be arithmetic, and by the general neatness and tasteful arrangement of the whole. Every pupil of a national school, from the sequel upwards inclusive, should be required to bring a short written exercise of some kind every day.

In many national schools, the home lessons are, as a rule, excessively long and vague; for instance, the children of a second class may, and often are in fact, told *to come prepared in the whole of the multiplication table, or to be able to spell all the difficult words in their read-*

*ing lesson!* If you prescribe for a child a task beyond his strength, he will do nothing at all; and in all schools where such absurd home lessons are assigned, the children in reality never trouble themselves in the least about them. All the home lessons, even for the highest classes, should be so short, that no pupil can plead inability to prepare them, and so distinct, that mistake or misconception shall be impossible. It is only when this is the case that the pupils can be held accountable for them. Neither should they be too numerous. Two lessons will be enough for the second class children; the sequel, and all above, may have two (but not more than two) oral lessons, with a written exercise every day. The subjects will have to be alternated; for instance, the third class may have lessons in grammar and geography, with a written arithmetical exercise, on three days of the week, and on the other days, a lesson in spelling, and a short piece of poetry, with either the same piece, or half a page of prose transcribed.

#### 6. ANNOUNCEMENT; REPETITION; EXAMINATION.

The whole of the pupils of one draft should prepare the same lessons. They should not have the same lesson on two successive days; even though they happen to break down, still they should go on to the next lesson for next day. If a child be absent for one or more days, *he should come prepared in the home lessons, both oral and written, of the next day after his last attendance.*

The best and surest method of announcement is to write the whole week's lessons for each draft on a sheet of paper, which is to be hung up if possible in a frame, opposite the circle occupied by the draft; thus, there will be as many lesson tablets, as there are drafts with home lessons. Printed lesson tables, which will suit any national school, are issued for this purpose by the Board; they should be always filled up and suspended before the drafts *on the evening before repetition day.* If a teacher cannot obtain these forms, he can easily make

them for himself. The pupils, especially those of the advanced classes, should be expected to examine the tablets and ascertain the lessons for themselves; but to prevent all mistake, and take away all excuse, those of each draft should be reminded in the evening by the monitor in charge, of the lessons for next day.

Friday should be set apart for repetition; there should be no special lesson for that day, but the pupils should come prepared for examination in all the lessons of the preceding four days. Some prefer Monday, but this is a matter which of course every teacher will arrange as best suits his own school.

Among the different inducements to stimulate boys in the preparation of their home lessons, one of the strongest is to throw them into competition with each other; this is the plan adopted in many of the model and other national schools, and it works very successfully. Let the answering of each boy be represented each day by a number, the highest mark for perfect answering in any one lesson being 5. In the Central Model Schools the answer to each question is recorded; but as this would be impossible in most ordinary schools, the teacher, after hearing the whole of a lesson from one pupil, assigns him whatever number from 0 to 5 his manner of answering may deserve. If he miss nothing, give him 5; if he stumble a little, 4; if his answering be middling, 3; 2, if bad; and 1, if very bad. Let these numbers be all preserved; and at the end of the week let each pupil's marks be totted up, with whatever others he may have got in arithmetic, or any other subject. On Monday morning the boys of each draft range themselves in the order of their total marks, the highest first, the next second, &c.; and they retain these same places through the whole week. To record and preserve the answers, there should be a marking slate for each draft, specially ruled for the purpose, with the pupils' names all written on it, which should be kept *hung* up opposite the circle during the whole week. *Wherever the teacher has infused a proper spirit into*

his pupils, this method of marking and classifying according to the results invariably produces a keen competition for precedence.

The method of examination is very important. Some teachers examine a whole draft simultaneously, by questioning the pupils in succession—a single question to each—as in ordinary teaching. This is not a good plan for several reasons, among which may be mentioned the facility it affords for the escape of those who are unprepared. The proper and obvious way is to examine one child wholly in one lesson before you leave him; this enables you at once to ascertain what he knows about it, and the number he deserves can be marked down immediately before the next pupil is examined. In the examination of home lessons there should be no passing of questions from one to another as in class teaching. Some lessons are best examined by questioning, as derivations, capitals of countries, &c.; but there is a very numerous class the pupil's knowledge of which should be tested, by simply causing him to repeat them from beginning to end; for example, "The seas of Europe," the definitions and list of "Indefinite Pronouns," a piece of poetry, &c. The teacher's judgment must determine which method is best in each case; it very often requires a mixture of both.

The proper, as well as the most expeditious method of examining lessons on the first three classes of words in "The Spelling Book Superseded," is not orally, but by slate, the pupils being called on, not to spell, but to write them. The teacher, pronouncing and giving the meaning of the word, but not spelling it, says, "Write the word, 'pair,' a couple," and all in the draft immediately write down the word merely without the meaning. Unless they are prepared, they may write "pare," or "pear." After writing this, they get another, and so on, till they have written as many as the teacher thinks necessary, when they show slates; and the teacher, glancing at each with pencil in hand, first marks them according to their accuracy, and then transfers all the



numbers to the marking slate. The spelling lesson of a large draft may in this way be examined and marked in a few minutes.

It has been already remarked that children should not be allowed to commit to memory anything they do not understand; the teacher, therefore, should take occasion to explain to the pupils of the different drafts any of their lessons for next day (especially grammar) that are in any degree difficult. As far as practicable, too, the home lessons in grammar and geography of each particular day ought to be introduced into the ordinary daily lessons on the same subjects, and fully explained.

END.

